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Acronym List

Acronym	Definition
ANSI	American National Standards Institute
API	Application Programming Interface
CADM	C4ISR Core Architecture Data Model
CRD	Capstone Requirements Document
DISR	Department of Defense Information Technology Standards Registry
DoD	Department of Defense
DoDAF	Department of Defense Architecture Framework
DoDD	Department of Defense Directive
DoD/IT	Domain Owners Integration Team
BEA	Business Enterprise Architecture
BMMP	Business Management Modernization Program
GIG	Global Information Grid
IDS	Intrusion Detection System
IEEE	Institute of Electronics & Electrical Engineers
JTA	Joint Technical Architecture
LAN	Local Area Network
NIST	National Institute of Standards and Technology
NCES	Net-Centric Enterprise Services
OMB	Office of Management & Budget
OV	Operational View
RFID	Radio Frequency Identification
SOAP	Simple Object Access Protocol
SV	Systems View
SV-9	Systems Technology Forecast
TCP/IP	Transmission Control Protocol
TRM	Technical Reference Model

Acronym	Definition
TV	Technical Standards View
TV-1	Technical Architecture Profile
TV-2	Standards Technology Forecast
W3C	World Wide Web Consortium
WS	Web Service
XML	Extensible Markup Language

1 TV-2 Product Description

1.1 Introduction

This document describes the current Technical Standards Forecast (TV-2) for the Business Enterprise Architecture (BEA). The Product Description section supplements the product information in the BEA Overview and Summary Information (AV-1) document. Following this description is a set of tables that provide the emerging technical standards that apply to the BEA and may be used in its implementation, but not in lieu of the mandated standards in the Technical Architecture Profile (TV-1). Finally, the Engineering Decision Record provided in the Appendix supplements the information in the Architecture Development Methodology (ADM) Operational View (OV)-Systems View (SV)-Technical Standards View (TV) Modeling Guidelines to provide insight into the development of this product.

1.2 System Technology Forecast Definition and Purpose

According to the Department of Defense (DoD) Architecture Framework (DoDAF), "A Standards Technology Forecast is a detailed description of emerging technology standards relevant to the systems and business processes covered by the architecture." The DoDAF goes on to state that these technical standards are the collection of emerging rules that implement and sometimes constrain the choices that can be made in the design and implementation of an architecture. The technical standards generally govern what hardware and software may be implemented and what system data formats may be used

The TV-2 is constructed in accordance with the architecture purpose, and in line with the SV. In the architecture, the selected standards are related to the systems, system functions, system data, hardware/software items, and/or communication protocols in SV-1, SV-2, SV-4, SV-6, OV-7, and SV-11 products, where applicable. In support of the architecture implementer or system designer, each standard listed in the profile is associated with the SV elements that implement or use that standard.

The BEA TV-2 contains forecast information about the availability of BEA relevant emerging information technology standards over time. This forecast information includes confidence factors as suggested by the source of the information. Forecast information is developed through research and interviews with technology specialists in the government, commercial, and third party organizations. Confidence factors are estimates, represented as decimal numbers between 0 and 1, of the assurance the source possesses that the forecast statement will occur. A forecast of 0.5 represents a 50% likelihood of occurrence. A forecast with a confidence factor of 0.9, or 90%, has a very high probability of occurrence.

The forecast information in the TV-2 may be used to assess the potential impacts changing standards might have upon current architectures, and thus influence their transition development. The BEA TV-2 is tailored to focus on technology areas that are related to the purpose for which BEA has been developed and helps to identify issues that may affect the architecture.

Typically, development of the TV-2 starts with one or more overarching reference models or standards profiles, to include the Federal Enterprise Architecture Technical Reference Model (TRM), the DoD Enterprise Architecture Technical Reference Model (DoD EA TRM), and the

Defense Information Technology Standards Registry (DISR), which replaced the Joint Technical Architecture (JTA). From these reference models or standards profiles, the architect selects the service areas relevant to the architecture. The identification of relevant services within these service areas subsequently points to agreed-upon standards that can be applied to the architecture.

1.3 Structure of the BEA TV-2

The following paragraphs show the hierarchical structure to the TV-2, consisting of a three tier set of categories: service areas, which contain services that conform to standards. Such a structure makes it easier for architecture implementers and system designers to locate the standards that apply to them. The structure adopted for the BEA TV-2 is that defined by the Core Architecture Data Model (CADM) for a DoDAF-compliant architecture. The CADM calls these categories:

- Technology Service Areas
- Technical Services
- Standards

As shown in Figure 1-1, Relationship between Technology Service Area, Technical Service, and Standard, Technical Service, and Standard, one-to-one and one-to-many relationships may exist at any level of this hierarchy. Technology Service Areas group similar Technical Services together for increased organization and comprehension. There may be one or more Technical Services in any given Technology Service Area. For example, Wireless Local Area Network (LAN) and Ethernet may be both considered Technical Services within the Data Transfer Technology Service Area. Standards represent agreed to means to implement all or part of a Technical Service. For example, Institute of Electrical and Electronics Engineering (IEEE) 802 standards are used to implement Ethernet and wireless networks. One or more standards support a given Technical Service.

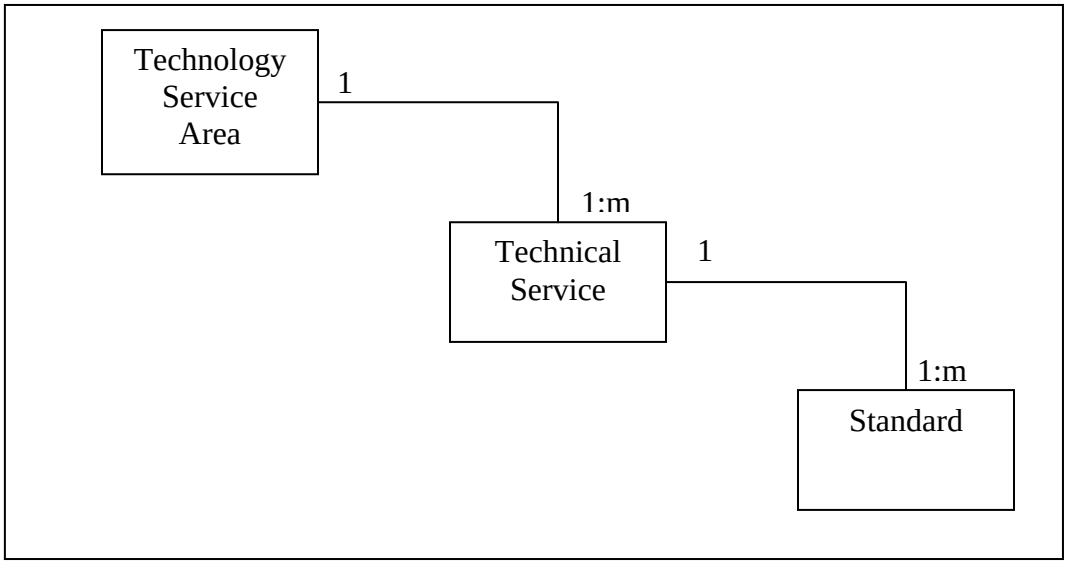

Figure 1-1, Relationship between Technology Service Area, Technical Service, and Standard

The current version of the BEA TV-2 takes it structure from the DoD EA TRM. It contains four Technology Service Areas, drawn from the Core Service Areas of the DoD EA TRM. This provides a high degree of traceability between the two documents and makes optimal use of the DoD EA TRM as the interface between the BEA and the FEA TRM, to which Business Management Modernization Program (BMMP) programs must map for Office of Management and Budget (OMB) Exhibit 300 purposes.

The current BEA Technology Service Areas are:

- Component Framework: The underlying foundation, technologies, standards, and specifications by which system capabilities are built, exchanged, and deployed across the Business Mission Area (BMA).
- Service Access and Delivery: The collection of standards and specifications to support external access, exchange, and delivery of a system capability.
- Service Interface and Integration: The collection of technologies, standards, and specifications that govern the interface with a system capability.
- Service Platform and Infrastructure: The collection of delivery and support platforms, infrastructure capabilities and hardware requirements to support the construction, maintenance, and availability of a system capability.

1.4 Relating TV-2 Technical Services to SV Enterprise Services

The Technical Services that are assigned to each of these Technology Service Areas within the BEA TV-2 support the development of BEA-compliant information systems. These Technical Services were derived from and correspond to the nine Core Enterprise Services (CES) defined by the Net-Centric Enterprise Services (NCES) program office as the main components of the Enterprise Information Environment (EIE) defined by the Global Information Grid (GIG). In

addition, three other GIG Enterprise Services (GES), Human Resources Services, Infrastructure and Transport Services, and Logistics Services are addressed. During the development of the BEA, these GES have been associated with and linked to the definitions of the system entities that represent the required system capabilities shown in the BEA SV-1. The actual relationship between the TV Technical Services and SV Enterprise Services currently shown in the BEA was established through the detailed analytical efforts of TV and SV Team members.

Figure 1-2, Relationship between TV Technologies and SV Enterprise Services, shows how the Technical Services are connected to the Enterprise Services to bridge the TV and SV for the BEA. To connect to the Technical Services to the system entities that compose the BEA SV, a physical link has been established between Technical Services and Enterprise Services assigned to system entities in the Popkin System Architect (SA) tool that is used to maintain the BEA.

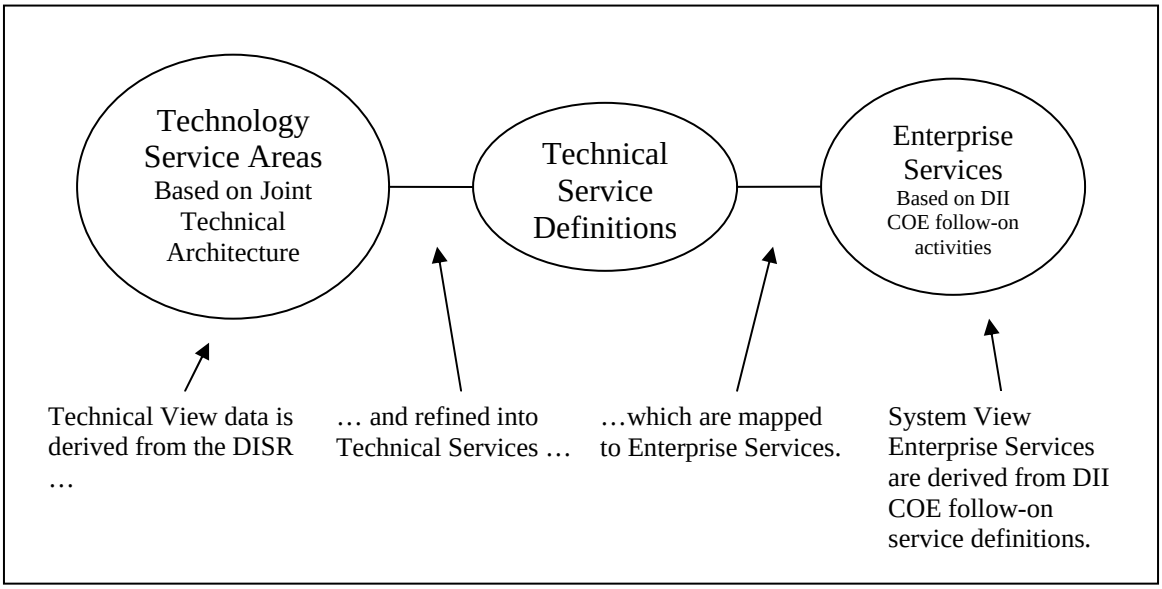

Figure 1-2, Relationship between TV Technologies and SV Enterprise Services

1.5 Emerging Standards

The TV-2 contains forecast information about the availability of emerging standards over time. Emerging standards are expected to become essential for providing interoperability and net-centric services across the DoD enterprise over the period addressed by the TV-2. These are candidate standards to help the Program Manager determine what is likely to change within three years, and to suggest an area where upgradeability should be a concern. The forecast information in the TV-2 is used to assess the potential impacts changing standards might have upon current architecture, and thus influence their transition development.

Compliance with the DISR is mandated for all DoD information systems to support interoperability and net-centricity across the DoD Enterprise. To accommodate this requirement, many of the BEA TV-2 Standards were adopted from emerging standards in the latest version of the DISR, which at the time of this TV-2 is DISR Baseline Release 04-2.0.

The BEA emerging standards focus on technology areas that are related to BEA and help to identify issues that may affect the architecture. This forecast information includes confidence factors as suggested by the source of the information. For emerging standards that are from the DoD Information Standards Registry (DISR) no independent analysis for timed forecasts is appropriate. The emerging status in DISR implies the forecast that the standard is expected to be mandated for use in the DoD within three years. A reference to the DISR is provided for such TV-2 standards instead of independent standard analysis and forecasts.

In order to avoid influencing system developers and architecture users toward a particular commercial solution, BEA TV analysts made a conscious effort during TV-2 product development to focus only on technologies, Technical Services, and Standards that support them, while avoiding discussion of the actual commercial products that implement them. This approach avoids the appearance that a particular commercial solution is preferred, while simultaneously delivering a complete and unbiased description of the Technical Service and Standards available to the BEA. It further decreased the likelihood of BEA products subsequently influencing solution developers and architecture users toward a specific product for implementation of the architecture.

1.6 TV-2 Development Process

The process used to develop and maintain the TV-2 products involves a lifecycle of five high order activities:

- Identify and define Technical Services and Standards data using specific selection criteria
- Organize that information into a data repository
- Collect additional information through subject matter expert interviews
- Refine the data collection to meet BEA requirements
- Produce the TV-2 product

The preceding combination of activities and requirements analysis outlines the procedural lifecycle used to establish, develop, and maintain the technical view of the BEA.

A review of the DoDAF documents and a concurrent analysis of the CADM data schema helped to identify all the data elements required for development of the TV-2 product. A baseline model for the TV-2 and a data repository facilitated the recording and reporting of TV-related data as it was developed for the BEA. Specific selection criteria, including DISR compliance and BEA applicability, were applied to data collected during extensive research, interviews, and analysis to develop the preliminary standards data used to populate and update the data repository. Collected data selected for inclusion in the TV-2 was reviewed by designated Government representatives and approved prior to inclusion in the Data Repository. The content of the data repository was extracted using pertinent reporting tools and assembled into this document, which represents the official BEA TV-2 product.

The fundamental requirement driving the content of the TV data repository is the mandate for compliance with the DISR. This was an appropriate requirement to begin with in light of the relative immaturity of SV products in the initial stages of BEA development. As the BEA products have matured, however, it is becoming possible to derive requirements for Technical Services in the TV data repository from the linkage of these services to system entities as shown in the SV-1. The result of this effort has been an end-to-end mapping of Enterprise Services in the SV to Technical Services shown in the TV. Based on the results of that mapping, a gap analysis facilitates the identification of Enterprise Services for which Technical Services have not been established, or conversely suggest Technical Services that might support an as yet unrecognized Enterprise Service.

In preparation for the data collection effort, TV analysts reviewed guidance and requirements from several sources, including:

- Clinger-Cohen Act
- OMB Circular A-130
- DoD Directive (DoDD 5200.2-R
- DoDD 5101.7
- DoDD 5200.1
- DoDD 5200.28
- DoDD 8000.1CADM v2.0
- GIG Capstone Requirements Document (CRD)

With this guidance, the TV team revalidated the plan to leverage standards recorded in the latest version of the DISR and include emerging standards based on the analysis of BMMP systems experts. TV analysts subsequently generated a baseline collection of data for input to the data repository. This accomplishment required a period research into the proposed standards that are not from the DISR, and the grooming of standards data from the latest version of the DISR. All these TV-2 standards were then sorted and mapped into the schema of Technology Service Area, Technical Service, and Standards. After loading the data into the repository, the TV team generated updated draft versions of the TV-2.

Producing an updated version of the product does not signal the end of the TV development process. Using the latest draft versions, the TV team enters a phase of analysis, which tailors the contents of the data repository to meet the specific needs of the current BEA release. This activity is guided by changes in requirements derived from the BEA SV. It drives the addition of new standards into the repository while simultaneously removing others. These engineering decisions and the rationale behind them are documented in Appendix A. The decisions made during this phase will continue to drive refinement and change in the TV-2 product as it evolves over time.

During this analytical procedure, many additional sources of data are considered by the TV team. These sources include technical experts (from contractor, commercial, and government

organizations), industry newsletters, and white papers. Iterations of the development process introduce new information, which the TV team refines, imports, and relates to BEA through subsequent releases of the TV-2. Ongoing performance of this analytical lifecycle will keep these products of the BEA at a point where they remain relevant and valuable to BMMP systems developers.

2 BEA TV-2 Standards

The DISR is the origin of many of the standards in the BEA TV-2. For these standards BEA analysts have not done the analysis to develop independent forecasts and instead references are provided to DISR and other sources of information. For BEA TV-2 standards that are not from the DISR, a consolidated forecasts is provided for the short term (2004-2005), mid-term.(2006-2007) and long term (2008-2010) with 0.9, 0.8, and 0.7 confidence factors respectively.

2.1 Component Framework

Technical Service	Standard	Forecast	Comment
2.1.1 Application Security	**2.1.1.1 draft-ietf-secsh-architecture-13.txt**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More information at: http://www.ietf.org/1id-abstracts.html	SSH is a protocol for secure remote login and other secure network services over an insecure network. This document describes the architecture of the SSH protocol, as well as the notation and terminology used in SSH protocol documents.

Technical Service	Standard	Forecast	Comment
	2.1.1.2 draft-ietf-secsh-connect-16.txt	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More information at: http://www.ietf.org/1id-abstracts.html	SSH is a protocol for secure remote login and other secure network services over an insecure network. This document describes the SSH Connection Protocol.
	2.1.1.3 draft-ietf-secsh-transport-15.txt	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More information at: http://www.ietf.org/1id-abstracts.html	SSH is a protocol for secure remote login and other secure network services over an insecure network. This document describes the SSH transport layer protocol which typically runs on top of TCP/IP.

Technical Service	Standard	Forecast	Comment
	2.1.1.4 draft-ietf-secsh-userauth-16.txt	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More information at: http://www.ietf.org/1id-abstracts.html	SSH is a protocol for secure remote login and other secure network services over an insecure network. This document describes the SSH authentication protocol framework and public key, password, and host-based client authentication methods.
	2.1.1.5 IETF RFC 2228	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	File Transfer Protocol, October 1997. Specifies an Internet standards track protocol for the Internet community. Defines extensions to the File Transfer Protocol (FTP) standard (STD9/RFC 959). These extensions provide strong authentication, integrity, and confidentiality on both the control and data channels. IETF RFC 2228 also introduces new optional commands, replies, and file transfer encodings.

Technical Service	Standard	Forecast	Comment
	2.1.1.6 IETF RFC 2289	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 2289, A One-Time Password System, February 1998, "A One-Time Password System," February 1998, provides authentication for system access (login)—and other applications requiring authentication—that is secure against passive attacks based on replaying captured reusable passwords. The One-Time Password System evolved from the S/KEY One-Time Password System released by Bellcore.

Technical Service	Standard	Forecast	Comment
2.1.2 Cryptographic Security	**2.1.2.1 CCDM/CCDF**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.idontknow.com	The Common Cryptologic Data Model (CCDM) and Common Cryptologic Data Format (CCDF), Release 2.3, 6 July 2001. Represent a new family of metadata/formats (implemented in XML) for the exchange of Cryptologic data. In limited use today, CCDM/CCDF was approved by NSA/CSS Enterprise Standards Program – Standards Board as an NSA/CSS standard in January 2001 and is emerging as the Cryptologic community standard for collaborative data sharing functions.
	2.1.2.2 IETF RFC 2743	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 2743, Generic Security Service Application Program Interface, Version 2, Update 1 January 2000. The Generic Security Service-Application Program Interface (GSS-API), as defined in RFC 1508, September 1993 (IETF), provides security services to callers in a generic fashion, supportable with a range of underlying mechanisms and technologies and hence allowing source-level portability of applications to different environments. RFC 1508 defines GSS-API services and primitives at a level independent of an underlying mechanism and programming language environment. RFC 2743, “GSS-API, Version 2.0,” J. Linn, Update 1 January 2000, revises RFC 1508, making specific, incremental changes in response to implementation experience and liaison requests.

Technical Service	Standard	Forecast	Comment
	2.1.2.3 XML-Encryption	BEA Emerging. Administration Body: W3C Initially Proposed by Numerous Recommendation. Srong support from major Web services vendors and World Wide Web Consortium/Organization for the Advancement of Structured Information Standards/Web Services Interoperability Organization (W3C/OASIS/WS-I) for almost all elements. This standard is still embryonic and is expected to read maturity by 2007. Will be in widespread use in the 2008-2010 time frame. More information at: http://www.w3c.org/Signature/	XML Encryption is a process for encrypting/decrypting digital content (including XML documents and portions thereof) and an XML syntax used to represent the (1) encrypted content and (2) information that enables an intended recipient to decrypt it. The data may be arbitrary data (including an XML document), an XML element, or XML element content. The result of encrypting data is an XML Encryption element which contains or references the cipher data. Used by WS-Security.

Technical Service	Standard	Forecast	Comment
2.1.3 Data Exchange	**2.1.3.1 A/D Conversion**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.plh.af.mil	The 2.4 Kbps Mixed Excitation Linear Prediction (MELP) algorithm specified in MIL-STD-3005 (Military Standard) is intended to provide seamless interoperability and enable end-to-end security across the domains of strategic and tactical satellite communications, including those using internetworking protocols. MIL-STD-3005 provides a common high performance voice encoding algorithm for use across the communications infrastructure.
	2.1.3.2 ANSI/AIAA R-004	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.aiaa.org/Publications/	This recommended practice establishes a means for describing mathematically the dynamics of flight vehicles. It defines important quantities and provides mathematical symbols for them, including axis systems, angles, velocities, forces, moments, energy, and their derivatives. This document is based on ISO 1151-1:1988 and 1151-3:1972, with additional considerations to adapt the principles in those standards for use with missiles and projectiles, as well as aircraft.

Technical Service	Standard	Forecast	Comment
	2.1.3.3 DoD 5015.2-STD:2002	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://jitc.fhu.disa.mil/recmgt/p50152s2.pdf	This Standard sets forth mandatory and optional baseline functional requirements for Records Management Application (RMA) software. This Standard will be used by DoD Components in the implementation of their records management programs.
	2.1.3.4 HDF v5	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://hdf.ncsa.uiuc.edu/HDF5/doc/RM_H5Front.html	HDF5 is a completely new Hierarchical Data Format product consisting of a data format specification and a supporting library implementation. HDF5 is designed to address some of the limitations of the older HDF product and to address current and anticipated requirements of modern systems and applications.

Technical Service	Standard	Forecast	Comment
	2.1.3.5 IBS TIDP	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://tdl.disa.mil	The IBS TIDP defines CMF data elements and forwarding rules between IBS and other members of the Joint Family of TDL Message Standards.

Technical Service	Standard	Forecast	Comment
	2.1.3.6 IEEE 1232.1	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://standards.ieee.org/reading/ieee/std/numerical.html	This document is the base standard for the AI -ESTATE set of standards. The overall concept of AI-ESTATE, which is a set of specifications for data interchange and for standard services for the test and diagnostic environment, is defined; mandatory requirements for implementing AI-STATE are specified; the elements of AI-ESTATE and their interrelationships are described; guidelines and requirements to govern the documents in the AI-ESTATE set of standards are established; and the terminology used throughout the set is defined. Formal models for information used in system diagnosis are defined. As part of the AI -ESTATE set of standards, this standard includes several models that form the basis for a format to facilitate exchange of persistent diagnostic information between two reasoners, and also provides a formal typing system for the services defined in the AI-ESTATE service specification. The purpose of the AI-ESTATE set of standards is to standardize interfaces between functional elements of an intelligent test environment and representations of knowledge and data for the functional elements of the intelligent test environment.

Technical Service	Standard	Forecast	Comment
	2.1.3.7 IEEE 1232.2	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://standards.ieee.org/reading/ieee/std/numerical.html	The scope of this component standard is to define the services needed to support AI-ESTATE. Project purpose: The purpose of this component standard is to provide the formal specifications of the services, transactions, and protocols necessary to insure the interoperability of AI-ESTATE compliant systems.
	2.1.3.8 IETF RFC 1889	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 1889, RTP: A Transport Protocol for Real-Time Applications, January 1996.

Technical Service	Standard	Forecast	Comment
	2.1.3.9 IETF RFC 2231	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	MIME Parameter Value and Encoded Word Extensions: Character Sets, Languages, and Continuations, November 1997, Identified in the DoD e-Business architecture Technical Standards.
	2.1.3.10 IETF RFC 2646	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 2646, The Text/Plain Format Parameter, August 1999. For IPv4 and IPv6, the SMTP standard is emerging.

Technical Service	Standard	Forecast	Comment
	2.1.3.11 IETF RFC 3015	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 3015, Megaco Protocol Version 1.0, November 2000.
	2.1.3.12 ISMA 1.0:2001	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.isma.tv/	ISMA Specification 1.0:2001, Internet Streaming Media Alliance. For on-demand or real-time video and audio streaming, the standard is emerging.

Technical Service	Standard	Forecast	Comment
	2.1.3.13 ISO/IEC 11179	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	Describes the standardization and registering of data elements to make data understandable and shareable, allowing the creation of a shared environment in much less time and with less effort than it takes for conventional data management methodologies.
	2.1.3.14 ISO/IEC 12087-5:1998	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	BIIF provides a foundation for interoperability in the interchange of imagery and imagery-related data among applications. It provides a detailed description of the overall structure of the format, as well as specification of the valid data content and format for all fields defined within a BIIF file. It provides a data format container for raster, symbol, and text data, along with a mechanism for including image-related support data.

Technical Service	Standard	Forecast	Comment
	2.1.3.15 ISO/IEC 13249-3	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	This part of ISO 13249: a) introduces the Spatial part of this International Standard, b) gives the references necessary for this part of this International Standard, c) defines notations and conventions specific to this part of this International Standard, d) defines concepts specific to this part of this International Standard, e) defines spatial user-defined types and their associated routines. The spatial user-defined types defined in this part adhere to the following: --A spatial user-defined type is generic to spatial data handling. It addresses the need to store, manage and retrieve information based on aspects of spatial data such as geometry, location, and topology. --A spatial user-defined type does not redefine the database language SQL directly or in combination with another spatial data type.

Technical Service	Standard	Forecast	Comment
	2.1.3.16 ISO/IEC 14772-1	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	Computer Graphics and Image Processing - The Virtual Reality Modeling Language - Part 1: Functional specification and UTF-8 encoding, 1998. The Virtual Reality Modeling Language (VRML) is a language for describing multi-participant interactive simulations.
	2.1.3.17 ISO/IEC 15444-2:2001	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.jpeg.org/	This Recommendation/International Standard defines a set of lossless (bit-preserving) and lossy compression methods for coding continuous-tone, bi-level, grey-scale, or color digital still images. This Recommendation International Standard specifies decoding processes for converting compressed image data to reconstructed image data specifies a codestream syntax containing information for interpreting the compressed image data specifies a file format provides guidance on encoding processes for converting source image data to compressed image data provides guidance on how to implement these processes in practice.

Technical Service	Standard	Forecast	Comment
	2.1.3.18 ISO/IEC 15948	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More information at: http://www.iso.org	The Portable Network Graphics (PNG) format was designed to replace the older and simpler GIF format and, to some extent, the much more complex TIFF format. The PNG 1.2 specification is currently in the Final Committee draft (FCD) stage with the ISO/IEC. JTA 5.1
	2.1.3.19 ISO/IEC 18023	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More information at: http://www.iso.org	Includes the SEDRIS data representation model (DRM). The DRM is a data model that addresses the representation of information entities rather than environmental concepts. A separate mechanism is required to denote what environmental concept a DRM information object, or set of information objects, is intended to represent. EDCS labels and EDCS codes provide the necessary denotation of these environmental concepts.

Technical Service	Standard	Forecast	Comment
	2.1.3.20 ISO/IEC 18025	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.sedris.org/wg8home	This International Standard establishes concepts to ensure that environmental information is: a. unambiguously defined, b. flexibly denoted and encoded, and c. easily bound in exchange formats and to programming languages. This International Standard specifies: d. classifications that define the type of environmental objects, e. attributes that define the state of environmental objects, a nd f. enumerates and units of measure that define how values of state are characterized. This International Standard specifies labels and codes because denoting and encoding a concept requires a standard way of identifying the concept.
	2.1.3.21 ISO/IEC 18026	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.sedris.org/wg8home	Spatial information processing requires a robust capability to describe location, or position. It also requires the ability to define directions and distances. Generally, this is accomplished through the use of coordinates. Interoperability of spatial data is facilitated through the adoption of a common and widely-known Spatial Reference Model (SRM) that allows the context in which coordinates, directions, and distances are defined to be known succinctly, and converted accurately into multiple definitions of geo- and non-georeferenced space. Georeferenced data constitute a major aspect of environmental data, although data referenced to other planetary (and solar) bodies will increase in importance.

Technical Service	Standard	Forecast	Comment
	2.1.3.22 MNG 1.0	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: ftp://swrinde.nde.swri.edu/pub/mng/documents	The Multiple-image Network Graphics (MNG) format is an extension to the PNG format for the storage and transmission of animated graphics and complex still images.
	2.1.3.23 OpenGL Graphics System:2001	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.sgi.com/software/opengl/manual.html	OpenGL draws primitives (points, line segments, or polygons) subject to several selectable modes. You can control modes independently of each other; that is, setting one mode doesn't affect whether other modes are set (although many modes may interact to determine what eventually ends up in the frame buffer). Primitives are specified, modes are set, and other OpenGL operations are described by issuing commands in the form of function calls. Primitives are defined by a group of one or more vertices.

Technical Service	Standard	Forecast	Comment
2.1.4 Electronic Data Interchange	**2.1.4.1 ISO 9735-1**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 9735-1:1988, Electronic data interchange for administration, commerce and transport (EDIFACT) – Application level syntax rules (Syntax version number 4) – Part 1: Syntax rules common to all parts.
	2.1.4.2 ISO 9735-2	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 9735-2:1998, Application level syntax rules (Syntax version number: 4) – Part 2: Syntax rules specific to batch EDI.

Technical Service	Standard	Forecast	Comment
	2.1.4.3 ISO 9735-3	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 9735-3:1998, Application level syntax rules (Syntax version number: 4) – Part 3: Syntax rules specific to interactive EDI.
	2.1.4.4 ISO 9735-4	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 9735-4:1998, Application level syntax rules (Syntax version number: 4) – Part 4: Syntax and service report message for batch EDI.

Technical Service	Standard	Forecast	Comment
	2.1.4.5 ISO 9735-5	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 9735-5:1999, Application level syntax rules (Syntax version number: 4) – Part 5: Security rules for batch EDI (authenticity, integrity and non-repudiation of origin).
	2.1.4.6 ISO 9735-6	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 9735-6:1999, Application level syntax rules (Syntax version number: 4) – Part 6: Secure authentication and acknowledgement message (message type – AUTACK).

Technical Service	Standard	Forecast	Comment
	2.1.4.7 ISO 9735-7	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 9735-7:1999, Application level syntax rules (Syntax version number: 4) – Part 7: Security rules for batch EDI (confidentiality).
	2.1.4.8 ISO 9735-8	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 9735-8:1998, Application level syntax rules (Syntax version number: 4) – Part 8: Associated data in EDI.

Technical Service	Standard	Forecast	Comment
	2.1.4.9 ISO 9735-9	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 9735-9:1999, Application level syntax rules (Syntax version number: 4) – Part 9: Security key and certificate management message (message type – KEYMAN).

Technical Service	Standard	Forecast	Comment
2.1.5 Software Development	**2.1.5.1 .NET**	BEA Emerging. Most large-scale enterprises will continue to leverage Microsoft .net and Java J2EE technologies through 2008. Microsoft's market share will be dominated by, but not solely limited to, Small and midsize businesses through 2008. The number of new enterprise .Net implementations is expected to equal J2EE in the 2008-2010 time frame. More information at: http://msdn.microsoft.com/library/default.asp?url=/library/en-us/netstart/html/cpframeworkref_start.asp	The .NET Framework is the programming model for the .NET platform that supports building and running the next generation of applications and XML Web services. The .NET Framework provides a managed execution environment, simplified development and deployment, and integration with a wide variety of programming languages.
	2.1.5.2 ANSI/ISO/IEC 14882-1998	BEA Emerging. C++ continues to be used for performance-intensive infrastructure, tool, and simulation software. Through 2005, Hybrid C++/Java, C++/C#, solutions and pure VM plays (C#, Java) will supplant many of C++'s problem domains. As software security concerns grow, the added safety and introspection capabilities of VM-based systems such as Java and C#, as well as the rapidity of solutions development, will tilt many enterprise-level applications away from C++ implementations. C++ will still dominate in high-performance infrastructures, scientific, and visualization software through 2010. More information at: INCITS/ISO/IEC 14882-1998: Programming languages -- C++ http://www.iso.org/iso/en/CatalogueDetailPage.CatalogueDetail?CSNUMBER=25845&ICS1=35&ICS2=60&ICS3= http://www.iso.org/iso/en/CatalogueDetailPage.CatalogueDetail?ICS1=0&ICS2=0&ICS3=0&CSNUMBER=25845.	C++ is a general purpose programming language based on the C programming language. In addition to the facilities provided by C, C++ provides additional data types, classes, templates, exceptions, namespaces, inline functions, operator overloading, function name overloading, references, free store management operators, and additional library facilities. C++ introduced object-oriented concepts such as the "class" and "virtual functions" to C. C++ is a general purpose, relatively low-level, high-performance (compared to its OOP brethren) computer language.

Technical Service	Standard	Forecast	Comment
	2.1.5.3 ECMA 334	BEA Emerging. The dominant development language for the mostly language-agnostic dot-NET VM. Much conversion from the VB user base, but little from Unix-centric and Java communities. C# is rapidly gaining momentum among many .NET developers. In particular, we expect 60 percent or more of established Visual C++ developers to migrate to C# as their primary .NET development language during the by 2007. More information at: http://www.iso.org/ http://msdn.microsoft.com/vstudio/techinfo/articles/upgrade/Csharpintro.asp	Specifies the form and establishes the interpretation of programs written in the C# programming language. It specifies: --the representation of C# programs; --the syntax and constraints of the C# language; --the semantic rules for interpreting C# programs; --the restrictions and limits imposed by a conforming implementation of C#.
	2.1.5.4 IEEE 1232:2002	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://standards.ieee.org/reading/ieee/std/numerical.html	Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE) Overview and Architecture.

Technical Service	Standard	Forecast	Comment
	2.1.5.5 IEEE TeRM	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://standards.ieee.org/reading/ieee/std/numerical.html	To define the test resource information. This is a component standard of IEEE 1226 (ABBET). Project purpose: The purpose is to define the test resource information that describes test system and the interface to that information in an ABBET environment. There is no current standard which provides this capability.
	2.1.5.6 ISO/IEC 9899:1999	BEA Emerging. C programming language. Venerable and still widely deployed. Increasing challenges from object oriented languages better adapted to a networked business environment (e.g. J2EE & .Net). Implementations of C have begun to slip as newer developers move to J2EE and .Net. C remains popular, but losing mind share. C is expected to continue to lose ground to more modern development languages. More information at: INCITS/ISO/IEC 9899-1999: Programming Languages - C http://www.iso.org/iso/en/CombinedQueryResult.CombinedQueryResult?queryString=9899	When programming in C: ISO/IEC 9899:1999, Information Technology - Programming Language C. http://www.iso.org/iso/en/CombinedQueryResult.CombinedQueryResult?queryString=9899.

Technical Service	Standard	Forecast	Comment
	2.1.5.7 J2EE	BEA Emerging. J2EE has been the dominant architecture for modern distributed enterprise applications over the past several years but is now to relinquish some market share to .NET implementations -- particularly on IIS deployments. Most large-scale enterprises will continue to leverage Microsoft .net and Java J2EE technologies through 2008. The number of new enterprise .Net implementations is expected to equal J2EE in the 2008-2010 time frame. More information at: http://java.sun.com/j2ee/ http://jcp.org/en/jsr/detail?id=151	A component-based software standard for building Java-based applications. J2EE has historically been the most successful distributed application component standard.
	2.1.5.8 SAX	BEA Emerging. Currently very much a de facto standard, since it is supported by most XML parsers and is used by lots of applications. Is expected to continue to improve and evolve in the programming community. More information at: http://www.saxproject.org	Simple API for XML (SAX); An event-based API for an application to access an XML document. SAX2 is an extended version of the original SAX 1.0 API for XML parsers, which is now obsolete. SAX 2.0 adds support for XML namespaces, configurability as well as lexical and DTD information.
	2.1.5.9 XMI	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.oasis-	XML Metadata Interchange (XMI), Version 1.1, ad/99-10-22, 25 October 1999. The XML Metadata Interchange (XMI) standard describes an information interchange model. This model allows developers using UML object technology tools to exchange programming data in a common format by defining a set of XML Document Type Definitions (DTDs) for exchanging UML information.

Technical Service	Standard	Forecast	Comment
		open.org/cover/xmi.html	

2.2 Service Access and Delivery

Technical Service	Standard	Forecast	Comment
2.2.1 Physical Interface	**2.2.1.1 DVI**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More information at: http://www.ddwg.org/downloads.html	The DVI specification describes the implementation of DVI-I for supporting both analog and digital inputs through a single connector, this usage is not fool-proof and may result in interoperability problems under certain circumstances.
	2.2.1.2 ISO/IEC 15693-1:2000	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	Identification Cards - Contactless integrated circuit(s) - Vicinity cards- Part 1: Physical characteristics. This part of ISO/IEC 15693 specifies the physical characteristics of vicinity cards (VICC). It applies to identification cards of the card type ID-1 operating in vicinity of a coupling device. Part 1 of ISO/IEC 15693 specifies the physical characteristics of vicinity cards (VICC). It applies to identification cards of the card type ID-1 operating in vicinity of a coupling device.

Technical Service	Standard	Forecast	Comment
	2.2.1.3 ISO/IEC 15693-2:2001	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	Identification Cards - Contactless integrated circuit(s) - Vicinity cards- Part 2: Air interface and initialization, October 1999, with Technical Corrigendum 1:2001. This part of ISO/IEC 15693 specifies the nature and characteristics of the fields to be provided for power and bi-directional communications between vicinity coupling devices (VCDs) and vicinity cards (VICCs).
	2.2.1.4 ISO/IEC 15693-3:2001	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	Identification cards -- Contactless integrated circuit(s) - Vicinity Cards -- Part 3: Anticollision and transmission protocol.

Technical Service	Standard	Forecast	Comment
	2.2.1.5 ISO/IEC 7816-10:1999	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	Integrated circuit(s) card with contacts - Part 10: Electronic signals and answer to reset for synchronous cards. Part 10: Synchronous Cards (ISO 7816-10:1999) defines electronic signals and answer to reset for synchronous cards.
	2.2.1.6 ISO/IEC 7816-8:1999	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	Identification Cards - Integrated circuit(s) card with contacts - Part 8, Security architecture and related interindustry commands. Part 8: Inter-industry Security Commands (ISO 7816-8: 1999) defines on-card security architecture.

Technical Service	Standard	Forecast	Comment
	2.2.1.7 ISO/IEC 7816-9:2000	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	Identification Cards - Integrated circuit(s) card with contacts - Part 9: Enhanced interindustry commands. Part 9: Additional interindustry commands and security attributes. This part of ISO/IEC 7816 specifies: a description and coding of the life cycle of cards and related objects; A description and coding of security attributes of cards related objects; Functions and syntax of additional interindustry commands; data elements associated with these commands; a mechanism for initiating card-originated messages.
	2.2.1.8 ISO/IEC CD 7816-11	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://wws.iso.org	Integrated circuit(s) card with contacts; Part 11, Personal verification through biometric methods in integrated circuit cards, 2000.

Technical Service	Standard	Forecast	Comment
	2.2.1.9 ISO/IEC CD 7816-15	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://wws.iso.org	Integrated circuit(s) card with contacts; Part 15, Cryptographic information application, 2000.
	2.2.1.10 NADSI	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://hq.nato.int/structur/AC/224/ag4/4575/4575.htm	The STANAG will define an interface for advanced digital storage systems, such as solid state memories or disk arrays with the aim of providing cross servicing capabilities for NATO nations' reconnaissance assets as well as the exploitation of the imagery data in any reconnaissance ground station. The interface will be a high data rate port to allow direct download of the imagery data either at the aircraft or at the ground station once the memory has been transferred to a reconnaissance exploitation ground station.

Technical Service	Standard	Forecast	Comment
	2.2.1.11 SLP-MSG-210	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: www.argreenhouse.com/society/TacCom/papers98/27_05i.pdf	SLP-MSG-210, Revision, Sensor Link Protocol Message Set, 26 March 2001. The Sensor Link Protocol Message Set (SLP) was developed for use as a common interface between electro-optical sensor systems and a diverse set of host computer systems. The SPL message set is decoupled from lower layer protocols to allow implementers the flexibility to select from a number of open standards such as RS-232/485, FireWire or Universal Serial Bus (USB). The SLP message set is used in conjunction with the SLP Interface Control Document to develop a common digital data exchange mechanism between sensors and host computing devices that offer full remote operation and control of those sensors by a host computing device in both a point-to-point and networked environment.

Technical Service	Standard	Forecast	Comment
2.2.2 Video Teleconferencing	**2.2.2.1 IETF RFC 3261**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 3261, Session Initiation Protocol (SIP), June 2002.
	2.2.2.2 IETF RFC 3435	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 3435, Media Gateway Control Protocol (MGCP) Version 1.0, January 2003.

Technical Service	Standard	Forecast	Comment
	2.2.2.3 ITU-T H.248	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.itu.int/publications/index.html	ITU-T H.248, Gateway Control Protocol, June 2000.
	2.2.2.4 ITU-T H.264	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.itu.int/publications/index.html	This Recommendation /International Standard was developed in response to the growing need for higher compression of moving pictures for various applications such as videoconferencing, digital storage media, television broadcasting, internet streaming, and communication.

2.3 Service Interface and Integration

Technical Service	Standard	Forecast	Comment
2.3.1 Asset Management	**2.3.1.1 ISO 10303-203:1994**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	Product data representation and exchange - Part 203: Application protocol: Configuration controlled design, 1994, with Amendment 1:2000. This part of ISO 10303 specifies the integrated resources necessary for the scope and information requirements for the exchange between application systems of configuration-controlled 3D designs of mechanical parts and assemblies. Configuration in this context only includes data and processes that control the 3D product design data. Exchange is used as a scoping consideration to narrow the scope to only those data which are exchanged as part of the 3D product definition. Organizations exchanging data within the scope of this part of ISO 10303 may have a contractual relationship, the details of which are outside the scope of this part.
	2.3.1.2 ISO 10303-204	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology	Product data representation and exchange - Part 204: Application protocol: Mechanical design using boundary representation, 2002. Specifies the use of the integrated resources necessary for the scope and information requirements for the use and exchange of boundary representation solid models in the mechanical engineering design context. This document describes an application reference environment for the generation and exchange of volume-based design data in the computer-aided mechanical design process, together with appropriate data models and a physical file implementation form. The information model supports all

Technical Service	Standard	Forecast	Comment
		Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	geometric and topological aspects of a complete description of the shape and size of an object. It was originally developed for applications in mechanical engineering design using the CAD modelling technique boundary representation (B-rep) solid modelling and may be appropriate for other application areas using this technique.
	2.3.1.3 ISO 10303-207	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 10303-207:1999, Industrial automation systems and integration – Product data representation and exchange – Part 207: Application Protocol: Sheet metal die planning and design with Technical Corrigendum 1:2001.
	2.3.1.4 ISO 10303-214	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It	ISO 10303-214:2001, Industrial automation systems and integration – Product data representation and exchange – Part 214: Application Protocol: Core data for automotive mechanical design processes.

Technical Service	Standard	Forecast	Comment
		may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	
	2.3.1.5 ISO 10303-225	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	ISO 10303-225:1999, Industrial automation systems and integration – Product data representation and exchange – Part 225: Application Protocol: Building elements using explicit shape representation.
	2.3.1.6 ISO/CD 10303-215	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to	ISO/CD 10303-215, Industrial automation systems and integration – Product data representation and exchange Part: 215 Application Protocol: Ship Arrangements.13 November 2001.

Technical Service	Standard	Forecast	Comment
		Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	
	2.3.1.7 ISO/CD 10303-218	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	Product data representation and exchange Part: 218 Application Protocol: Ship Structures, 28 August 2001. Specifies the information requirements for exchange of ship structural systems data for ship pre-design, design, production, and inspection/ survey. Product definition data pertaining to the ship's structure includes: hull structure, superstructure and all other internal structures of commercial and naval ships.
	2.3.1.8 PDML	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is	Product Data Markup Language (PDML) is an Extensible Markup Language (XML) vocabulary designed to support the interchange of product information among commercial systems (such as PDM systems) or government systems (such as JEDMICS).

Technical Service	Standard	Forecast	Comment
		expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. More information at: http://www.pdit.com/pdml/specs/PdmlSpecification-06.doc	
	2.3.1.9 RFID	BEA Emerging. The benefits of radio frequency identification are overhyped and RFID will live up to the near-term promises that have been made for this technology. Through 2007, the strategic business cases for RFID will be meaningfully explored by only limited numbers of early adopters because of the exceptional costs associated with RFID technology. In the 2008-2010 time frame organizations will start to strategically deploy RFID technology. Reference: Gartner Research ID Number: SPA-23-1513. More information at: http://www.epcglobalinc.org/standards_technology/specifications.html	Radio frequency identification (RFID) first appeared in tracking and access applications during the 1980s. These wireless AIDC systems allow for non-contact reading and are effective in manufacturing and other hostile environments where bar code labels could not survive. RFID has established itself in a wide range of markets including livestock identification and automated vehicle identification (AVI) systems because of its ability to track moving objects.

Technical Service	Standard	Forecast	Comment
2.3.2 Data Management Services	**2.3.2.1 ISO/IEC 9075-1**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	Defines the data structure and basic operations on SQL-data. It provides functional capabilities for creating, accessing, maintaining, controlling, and protecting SQL-data. Specifies the syntax and semantics of a database language: For specifying and modifying the structure and the integrity constraints of SQL-data. For declaring and invoking operations on SQL-data and cursors. For declaring database language procedures. It also specifies an Information Schema that describes the structure and the integrity constraints of SQL-data. Provides a vehicle for portability of data definitions and compilation units between SQL-implementations. Provides a vehicle for interconnection of SQL - implementations.
	2.3.2.2 ISO/IEC 9075-2	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at:	Defines the data structure and basic operations on SQL-data. It provides functional capabilities for creating, accessing, maintaining, controlling, and protecting SQL-data. Specifies the syntax and semantics of a database language: For specifying and modifying the structure and the integrity constraints of SQL-data. For declaring and invoking operations on SQL-data and cursors. For declaring database language procedures. It also specifies an Information Schema that describes the structure and the integrity constraints of SQL-data. Provides a vehicle for portability of data definitions and compilation units between SQL-implementations. Provides a vehicle for interconnection of SQL-implementations.

Technical Service	Standard	Forecast	Comment
		http://www.ansi.org	
	2.3.2.3 ISO/IEC 9075-3:1999	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	Defines the structures and procedures that may be used to execute statements of the database language SQL from within an application written in a standard programming language in such a way that procedures used are independent of the SQL statements to be executed.
	2.3.2.4 ISO/IEC 9075-4	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil	Specifies the syntax and semantics of a database language for declaring and maintaining persistent database language routines in SQL-server modules. The database language includes: The specification of statements to direct the flow of control. The assignment of the result of expressions to variables and parameters. The specification of condition handlers that allow SQL-invoked routines to deal with various conditions that arise during their execution. The specification of statements to signal and resignal conditions. The declaration of local cursors. The declaration of local variables. It also includes the definition of the Information Schema tables that contain schema information pertaining to SQL-server modules and SQL-invoked routines. NOTE 1 - The context for this part of ISO/IEC 9075 is

Technical Service	Standard	Forecast	Comment
		More Information at: http://www.ansi.org	described by the Reference Model of Data Management (ISO/IEC 10032:1993).
	2.3.2.5 ISO/IEC 9579:2000	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	This International Standard, Remote Database Access for SQL (RDA), defines a model for the remote interaction of an SQL-client and one or more SQL-servers through communication media, and defines the encoding of messages, the semantics of messages and associated facilities for mediating the interaction between one SQL-client and one SQL-server. This International Standard also defines a mapping of the RDA Protocol to the specific communication infrastructures TCP/IP and Transport Layer Security (TLS). This International Standard relies upon the facilities provided by ISO/IEC 9075 (SQL) and ISO/IEC 9075-3 (SQL/CLI). This International Standard also: -- identifies potential security vulnerabilities in remote database access using RDA, -- defines RDA facilities which protect against the potential vulnerabilities.

Technical Service	Standard	Forecast	Comment
2.3.3 Internet Protocol	**2.3.3.1 IETF RFC 1995**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 1995, Incremental Zone Transfer in DNS, August 1996. For IPv4 and IPv6, this DNS related standard is emerging.
	2.3.3.2 IETF RFC 1996	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at:	IETF RFC 1996, A Mechanism for Prompt Notification of Zone Changes (DNS NOTIFY), August 1996.

Technical Service	Standard	Forecast	Comment
		http://www.ietf.org	
	2.3.3.3 IETF RFC 2210	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 2210, The Use of RSVP with IETF Integrated Services, September 1997. To provide services over the LAN/WAN beyond the current best-effort IP-based service, this standard protocol, currently under development, to enable end-to-end QoS are emerging for IPv4 and IPv6.
	2.3.3.4 IETF RFC 2420	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil	The Point-to-Point Protocol (PPP) [1] provides a standard method for transporting multi-protocol datagrams over point-to-point links. The PPP Encryption Control Protocol (ECP) [2] provides a method to negotiate and utilize encryption protocols over PPP encapsulated links.

Technical Service	Standard	Forecast	Comment
		More Information at: http://www.ietf.org	
	2.3.3.5 IETF RFC 2473	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 2473, Generic Packet Tunneling in IPv6 Specification, December 1998.
	2.3.3.6 IETF RFC 2507	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil	IETF RFC 2507, IP Header Compression, February 1999.

Technical Service	Standard	Forecast	Comment
		More Information at: http://www.ietf.org	
	2.3.3.7 IETF RFC 2535	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 2535, DNS Security Extensions, March 1999. In cases where DNS authentication and integrity protection is needed, the DNSSEC standards are emerging. DNSSEC defines extensions to DNS to support security requirements, data integrity and authentication, through cryptographic digital signatures. However, DNSSEC as defined by IETF RFC 2535 has been shown to have serious problems, so IETF RFC 2535 is being updated. Once IETF RFC 2535 is updated to repair these problems, it is expected to be mandated. The standard is emerging for DNS security.
	2.3.3.8 IETF RFC 2710	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0.	IETF RFC 2710, Multicast Listener Discovery (MLD) for IPv6, October 1999.

Technical Service	Standard	Forecast	Comment
		http://disronline.disa.mil More Information at: http://www.ietf.org	
	2.3.3.9 IETF RFC 2732	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 2732, Format for Literal IPv6 Addresses in URLs, December 1999. For IPv6, this standard for the syntax of URLs, is emerging.
	2.3.3.10 IETF RFC 2794	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline	IETF RFC 2794, Mobile IP Network Access Identification Extension for IPv4, March 2000. Mobile Host Protocol (MHP) allows the transparent routing of IP datagrams to mobile nodes in the Internet. Each mobile node is always identified by its home address, regardless of its current point of attachment to the Internet. For IPv4, the standard is emerging.

Technical Service	Standard	Forecast	Comment
		Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	
	2.3.3.11 IETF RFC 2845	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 2845, Secret Key Transaction Authentication for DNS (TSIG), May 2000. The DNS is also a critical operational part of a TCP/IP-based infrastructure, and authentication and integrity mechanisms are often necessary to protect it. In cases where DNS authentication is needed and a shared secret key approach is appropriate, in particular in zone transfers between authoritative servers, the standard is emerging.
	2.3.3.12 IETF RFC 3031	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology	IETF RFC 3031, Multi-protocol Label Switching Architecture, January 2001.

Technical Service	Standard	Forecast	Comment
		Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	
	2.3.3.13 IETF RFC 3168	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 3168, The Addition of Explicit Congestion Notification (ECN) to IP, September 2001.
	2.3.3.14 IETF RFC 3175	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense	IETF RFC 3175, Aggregation of RSVP for IPv4 and IPv6 Reservations, September 2001.

Technical Service	Standard	Forecast	Comment
		Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	
	2.3.3.15 IETF RFC 3241	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 3241, Robust Header Compression (ROHC) over PPP, April 2002.
	2.3.3.16 IETF RFC 3344	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard.	IETF RFC 3344, IP Mobility Support for IPv4, August 2002.

Technical Service	Standard	Forecast	Comment
		Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	
	2.3.3.17 IETF RFC 3513	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 3513, Internet Protocol Version 6 (IPv6) Addressing Architecture, April 2003.
	2.3.3.18 IETF RFC 3587	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard.	IETF RFC 3587, IPv6 Global Unicast Address Format, August 2003.

Technical Service	Standard	Forecast	Comment
		Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	
	2.3.3.19 VPN Protection Profile	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://csrc.nist.gov/cc/pp	Virtual Private Network Protection Profile for Protecting Sensitive Information, Version 1.0, 26 February 2000. A Protection Profile prepared by the Information Systems Security Organization of NSA and focused on Virtual Private Networking utilizing IPse.

Technical Service	Standard	Forecast	Comment
2.3.4 Medical	**2.3.4.1 ISBT 128 v1.4**	BEA Emerging. This standard is essential for providing interoperability and netcentric services across the Department of Defense enterprise. This standard is mandated in the Department of Defense Information Technology Standards Registry for the management development and acquisition of new and improved systems throughout the Department of Defense. This is a current and established standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.unix.org/version3/theguide.html	Bar Code Symbology and Application Specification for Labeling of Whole Blood and Blood Components, Version 1.4.0, June 2001. ISBT 128 is an adaptation of a conventional bar-coding system known as Code 128. This Code has been adapted for use in Blood Transfusion Services throughout the world by the International Society of Blood Transfusion (ISBT). Hence the term ISBT 128. The donation number comprises 14 characters that contain information relating to the country, the centre of origin, the year of collection, a sequential number and a check character. Each ISBT 128 donation number is unique on a world-wide basis.
	2.3.4.2 ISBT 128 v1.4	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iccbba.com/oldwe	ISBT 128 is an adaptation of a conventional bar -coding system known as Code 128. This Code has been adapted for use in Blood Transfusion Services throughout the world by the International Society of Blood Transfusion (ISBT). Hence the term ISBT 128. The donation number comprises 14 characters that contain information relating to the country, the centre of origin, the year of collection, a sequential number and a check character. Each ISBT 128 donation number is unique on a world-wide basis.

Technical Service	Standard	Forecast	Comment
		bsite/introductiontoisbt128.htm	
2.3.5 Web Services	**2.3.5.1 ASAP**	BEA Emerging. Administration Body: OASIS Initially Proposed by Amberpoint, Computer Associates, DataPower, Fujitsu, iWay Working group has been formed. Early implementations of this specification provided by vendors permit experimentation, but are not recommended for production use. In the 2006-2007 timeframe more robust implementations are expected to be available and protocol will be well into standards process and usage then is encouraged. In the 2008-2010 time frame the standards is expected to be fully ratified, and have wide scale de facto adoption. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=asap	Asynchronous Service Access Protocol. The purpose of the ASAP TC is to create a very simple extension of Simple Object Access Protocol (SOAP) that enables generic asynchronous web services or long-running web services.
	2.3.5.2 BPEL4WS	BEA Emerging. Administration Body: OASIS Initially Proposed by BEA, IBM, Microsoft Specification has been published. Early implementations of this specification provided by vendors permit experimentation, but are not recommended for production use. In the 2006-2007 timeframe more robust implementations are expected to be available and protocol will be well into standards process and usage then is encouraged. In the 2008-2010 time frame the standards is expected to be fully ratified,	Business Process Execution Language. Defines a notation for specifying business process behavior based on Web services. Business processes can be described in two ways. Executable business processes model actual behavior of a participant in a business interaction. Business protocols, in contrast, use process descriptions that specify the mutually visible message exchange behavior of each of the parties involved in the protocol, without revealing their internal behavior. See WS-BPEL

Technical Service	Standard	Forecast	Comment
		and have wide scale de facto adoption. A possible alternative standards is WS-Choreography. More information at IBM Developerworks http://www-106.ibm.com/developerworks/webservices/library/ws-bpel/	
	2.3.5.3 ebSOA TC	BEA Emerging. Administration Body: OASIS Initially Proposed by Adobe, Booz Allen Hamilton, Boeing Technical Committee has been formed. Technical Specification is expected to be available by 2005. A non prescriptive (illustrative) guide to help implement a modern SOA is expected to be completed and available for experimentation in the 2006-2007 time frame. Early adoption of these best practices will begin in the 2007-2010 time frame, but it is still not expected to be ready for production use. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=ebsoa	Electronic Business Service Oriented Architecture. Advancing an e-business service-oriented architecture that builds on ebXML and other Web services technology.
	2.3.5.4 FWSI TC	BEA Emerging. Administration Body: OASIS Initially Proposed by Singapore Institute of Manufacturing Technology (SIMTech) Technical Committee has been formed. Implementation Process and Functional Elements specifications will be available by 2005. Implementations of these specifications in comercial products will occur in the 2006-2007 timeframe. Based on implementations, The guide's level of abstraction is	Framework for Web Services Implementation. Defining methods for broad, multi-platform, vendor-neutral implementation. Facilitate implementation of robust Web Services by defining a practical and extensible methodology consisting of implementation processes and common functional elements that practitioners can adopt to create high quality Web Services systems without re-inventing them for each implementation.

Technical Service	Standard	Forecast	Comment
		expected to fine tuned to facilitate implementation of robust Web Services in the 2007-2010 time frame. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=fwsi	
	2.3.5.5 HTTPR	BEA Emerging. Administration Body: IEFT Initially Proposed by IBM Work in progress. Version 1.1 of the HTTPR spec is now available. Robust implementations of this specification will be used for messaging soutions that need a transport level reliable protocol in the 2006-2007 time frame. Interest in HTTPR may fade in the 2008-2010 time frame as there is an increasing need for reliable messaging over unreliable networks, and as some competing reliable messaging specifications that works at a level higher than the underlying transport protocols become widely accepted. More information at IBM Developerworks http://www-106.ibm.com/developerworks/webservices/library/ws-phtt/	Reliable delivery of HTTP packets between the server and client. This solves a number of issues that are evident in current HTTP and opens the way to reliable messaging between Web services.
	2.3.5.6 IETF RFC 3080	BEA Emerging. Tied to the advance of Webservices in general. Early implementations, including open source implementations of BEEP, already exist are and mature to varying degrees. It is still considered an emerging service. As Webservice related standards reach maturity in the 2008-2010 time frame the field of contenders is expected to consolidate to industry preferred selections.	BEEP (the Block Extensible Exchange Protocol) is a protocol framework for connection oriented asynchronous message exchange. All message exchanges occur in the context of a channel. A profile defines the syntax and semantics of the message exchange.

Technical Service	Standard	Forecast	Comment
		More information at: ftp://ftp.rfc-editor.org/in-notes/rfc3080.txt http://www.webservices.org/index.php/article/articleview/419/1/12/%20http://www.webservices.org/index.php/article/articleview/633/1/24/	
	2.3.5.7 SAML	BEA Emerging. Administration Body: OASIS Standard Initially Proposed by Various inc., BEA, HP, IBM, RSA, SAP, Sun, Verisign SAML will gian expanding acceptance in the commercial tool space through 2005 and SAML will be integrated into most application servers and Single Sign On products by 2007. More information at OASIS http://www.oasis-open.org/committees/security/	XML-Based Security Services TC (SSTC) Security Assertion Markup Language. The Security Assertion Markup Language (SAML) is an XML-based framework for exchanging security information. This security information is expressed in the form of assertions about subjects, where a subject is an entity (either human or computer) that has an identity in some security domain.
	2.3.5.8 SOAP 1.2	BEA Emerging. Administration Body: W3C Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More information at: http://www.w3.org/TR/2002/CR-soap12-part0-20021219/	Simple Object Access Protocol (SOAP) 1.2, W3C Recommendation 24 June 2003 SOAP is a lightweight XML protocol used for exchanging information in a decentralized, distributed environment. It provides a simple method of enveloping and transferring an XML document using HTTP transfer protocol, and addressing the recipient using Uniform Resource Identifiers (URI).
	2.3.5.9 SOAP MTOM	BEA Emerging. Administration Body: W3C Initially Proposed by IBM, BEA, others Exists as a Working Draft specification; any usage requires hand coding. Superseds WS-Attachments A specification will emerge by 2005. Early implementations	SOAP Message Transmission Optimization Mechanism. MTOM describes a mechanism for optimizing the transmission and/or wire format of a SOAP message by selectively re-encoding portions of the message while still presenting an XML Infoset to the SOAP application. MTOM also describes an Inclusion Mechanism that operates in a binding-

Technical Service	Standard	Forecast	Comment
		of this specification provided by vendors permit experimentation, but are not recommended for production use in the 2006-2007 timeframe. More robust implementations are expected to be available for early adoption in the 2008+ time frame. More information at: http://www.w3.org/TR/soap12-mtom/	independent way, plus a specific binding for HTTP. Supersedes DIME
	2.3.5.10 Translation WS TC	BEA Emerging. Administration Body: OASIS Initially Proposed by Microsoft, Oracle, SAP Technical Committee has been formed. The initial Translation Web Services Business Process Terminology Specification and related WSDL Documents are expected to be available by 2005. This will drive the development of an industry standard WSDL file and UDDI businessservice entries in the 2006-2007 time frame. Will gain widespread adoption in 2008-2010 and publishers of content to be translated will be able to automatically connect to and use the services of translation vendors without any previous direct communication between the two. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=trans-ws	Automating the translation and localization process as a Web service. Define industry standard business process terminology for service types that are relevant to the software/content localization and translation industry; this terminology will then drive the development of an industry standard WSDL file and UDDI business service entries.
	2.3.5.11 UBL	BEA Emerging. The Universal Business Language (UBL) 1.0 was just approved as an OASIS committee draft.Based on xCBL 3.0, a widely adopted XML business document library. In the 2004-	Universal Business Language (UBL) is an XML based standard representation of business documents.

Technical Service	Standard	Forecast	Comment
		2005 time frame, tied to the advance of XML and Webservices in general. Early implementations already exist and mature to varying degrees. Still considered an emerging technology. Expect widespred use in 2006-2007. More information at: OASIS: Universal Business Language (UBL) [http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=ubl] http://oasis-open.org/committees/ubl/lsc/200206/industry.pdf	
	2.3.5.12 UDDI 3.0	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://uddi.org/pubs/uddi_v3.htm	UDDI Version 3.0 Published Specification, 19 July 2002. For publishing and discovery of web services, the following standard is emerging. Note that there are significant security issues that need to be considered before using this standard.
	2.3.5.13 WS Reliable Messaging	BEA Emerging. Administration Body: OASIS Initially Proposed by Various inc., Fujitsu, Hitachi, IONA,, NEC, Nokia, Oracle, SAP, Sonic, Sun	The purpose of this TC is to create a generic and open model for ensuring reliable message delivery for Web services. Reliable message delivery is the ability to guarantee message delivery to software applications - Web

Technical Service	Standard	Forecast	Comment
		Technical Committee formed. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. A potential alternative atandard is WS-ReliableMessaging. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsrm	services or Web service client applications - with a chosen level of quality of service (QoS).
	2.3.5.14 WS Security Services TC	BEA Emerging. Administration Body: OASIS Initially Proposed by Various inc., Baltimore, BEA, HP, IBM, Microsoft, RSA, SAP, Sun Technical Committee formed. In the 2004-2005 time frame new published specifications exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wss	The purpose of the Web Services Security TC is to continue work on the Web Services security foundations as described in the WS-Security specification.
	2.3.5.15 WS-Addressing	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by BEA, IBM, Microsoft, TIBCO Specification published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do	This specification enables messaging systems to support message transmission in a transport-neutral manner through networks that include processing nodes such as endpoint managers, firewalls, and gateways. Previously known as WS-Routing, WS-Referral and SOAP Routing Protocol (SOAP-RP).

Technical Service	Standard	Forecast	Comment
		experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. More information at IBM Developerworks http://www-106.ibm.com/developerworks/webservices/library/ws-add/	
	2.3.5.16 WS-AtomicTransaction	BEA Emerging. Administration Body: Initially Proposed by BEA, Microsoft, IBM Specification published. Superseds WS-Transaction. Currently available for review and evaluation. A robust specification will emerge by 2005. Early implementations of this specification provided by vendors permit experimentation, but are not recommended for production use in the 2006-2007 timeframe. More robust implementations are expected to be available for early adoption in the 2008+ time frame. More information at Microsoft MSDN http://msdn.microsoft.com/webservices/understanding/advancedwebservices/default.aspx?pull=/library/en-us/dnglobspec/html/wsat.asp	This specification provides the definition of the atomic transaction coordination type that is to be used with the extensible coordination framework described in the WS-Coordination specification. The specification defines three specific agreement coordination protocols for the atomic transaction coordination type: completion, volatile two-phase commit, and durable two-phase commit. Developers can use any or all of these protocols when building applications that require consistent agreement on the outcome of short-lived distributed activities that have all-or-nothing semantics.. WS-Atomic Transaction replaces Part I of the WS-Transaction
	2.3.5.17 WS-BPEL	BEA Emerging. Administration Body: OASIS Initially Proposed by BEA, IBM, Microsoft, others Technical Committee has been formed. Early implementations of this specification provided by vendors permit	Business Process Execution Language. The purpose of the BPEL TC is to continue work on the business process language published in BPEL4WS

Technical Service	Standard	Forecast	Comment
		experimentation, but are not recommended for production use. In the 2006-2007 timeframe more robust implementations are expected to be available and protocol will be well into standards process and usage then is encouraged. In the 2008-2010 time frame the standards is expected to be fully ratified, and have wide scale de facto adoption. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsbpel	
	2.3.5.18 WS-CAF	BEA Emerging. Administration Body: OASIS Initially Proposed by Arjuna Technologies, Fujitsu, IONA, Oracle, Sun Technical Committee has been formed. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. A possible alternative standard is WS-Coordination. More information at OASIS	WS Composite Application Framework. Proposes standard, interoperable mechanisms for managing shared context and ensuring business processes achieve predictable results and recovery from failure. WS-CAF is divided into three parts: Web Service Context (WS-CTX), a lightweight framework for simple context management; Web Service Coordination Framework (WS-CF), a sharable mechanism to manage context augmentation and lifecycle, and guarantee message delivery; Web Services Transaction Management (WS-TXM), comprising three distinct protocols for interoperability across multiple transaction managers and supporting multiple transaction models (two phase commit, long running actions, and business process flows)

Technical Service	Standard	Forecast	Comment
		http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn	
	2.3.5.19 WS-Choreography	BEA Emerging. Administration Body: W3C Initially Proposed by Various inc., EDS, HP, Oracle, Sun, Tibco Working Group formed. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. A possible alternative standard, that is currently more mature, is WS-BPEL More information at: http://www.w3.org/2002/ws/chor/	Working Group created to address the ability to compose and describe the relationships between Web services.
	2.3.5.20 WS-Coordination	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by BEA, IBM, Microsoft Specification published. Early implementations of this specification provided by vendors permit experimentation, but are not recommended for production use. In the 2006-2007 timeframe more robust implementations are expected to be available and protocol will be well into standards process and usage then is encouraged. In the 2008-2010 time frame the standards is expected to be fully ratified, and have wide scale de facto adoption.	Describes an extensible framework for providing protocols that coordinate the actions of distributed applications. See also WS-Atomic Transaction. More information at Microsoft MSDN

Technical Service	Standard	Forecast	Comment
		More information at IBM Developerworks http://www-106.ibm.com/developerworks/library/ws-coor/	
	2.3.5.21 WS-Discovery	BEA Emerging. Administration Body: none Initially Proposed by BEA, Canon, Intel, Microsoft Specification published. Currently available for review and evaluation. A robust specification will emerge by 2005. Early implementations of this specification provided by vendors permit experimentation, but are not recommended for production use in the 2006-2007 timeframe. More robust implementations are expected to be available for early adoption in the 2008+ time frame. More information at Microsoft http://msdn.microsoft.com/ws/2004/02/discovery/	Web Services Dynamic Discovery. Defines a multicast discovery protocol to locate services. By default, probes are sent to a multicast group, and target services that match return a response directly to the requestor. To scale to a large number of endpoints, the protocol defines the multicast suppression behavior if a discovery proxy is available on the network. To minimize the need for polling, target services that wish to be discovered send an announcement when they join and leave the network.
	2.3.5.22 WSDL 1.1	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil	Web Services Description Language defines the XML grammar needed for network services for distributed systems and provides the methods for automating the details involved in applications communication.

Technical Service	Standard	Forecast	Comment
		More Information at: http://www.w3.org/TR/wsdl	
	2.3.5.23 WSDM	BEA Emerging. Administration Body: OASIS Initially Proposed by Various inc., BMC, CA, Cisco, IBM, HP, Novell, Tibco Technical Committee has been formed and version 1.0 of the specification has been published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsdm	WS Distributed Management. The purpose of this TC is to define web services management, including using web services architecture and technology to manage distributed resources. This TC will also develop the model of a web service as a manageable resource.
	2.3.5.24 WS-Eventing	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by Microsoft, BEA, Tibco Specification published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. A possible alternative standard is WS-Notification. More information at Microsoft MSDN http://msdn.microsoft.com/webservices/understanding/specs/default.aspx?pull=/library/en-	WS-Eventing describes how to construct an event-oriented message exchange pattern using WS-Addressing concepts, allowing Web services to act as event sources for subscribers. It defines the operations required to manage subscriptions to event sources, as well as how the actual event messages are constructed.

Technical Service	Standard	Forecast	Comment
		us/dnglobspec/html/ws-eventing.asp	
	2.3.5.25 WS-Federation	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by IBM, Microsoft, BEA, RSA Security, Verisign Specification Published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. A possible alternative standard is Liberty Alliance. More information at IBM Developerworks http://www-106.ibm.com/developerworks/webservices/library/ws-fedworld/	Web Services Federation Language. This specification defines mechanisms to allow different security realms to federate by allowing and brokering trust of identities, attributes, authentication between participating Web services. The Web Services Federation specification is another component of the Web Services Security model that defines mechanisms to allow different security realms to federate by allowing and brokering trust of identities, attributes, authentication between participating Web services. The mechanisms defined in this specification can be used by passive and active requestors. The Web service requestors are assumed to understand the new security mechanisms and be capable of interacting with Web service providers.
	2.3.5.26 WSIL	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by IBM, Microsoft Specification published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. More information at Microsoft MSDN http://msdn.microsoft.com/library/en-us/dnglobspec/html/wsinspecs	WS Inspection Language - WS-Inspection. Provides an XML format for assisting in the inspection of a site for available services and a set of rules for how inspection related information should be made available for consumption. Consolidates earlier ADS (IBM) and DISCO (Microsoft).

Technical Service	Standard	Forecast	Comment
		pecindex.asp	
	2.3.5.27 WS-Manageability	BEA Emerging. Administration Body: OASIS Initially Proposed by CA, IBM, Talking Blocks Specification published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. More information at OASIS http://www.oasis-open.org/committees/documents.php?wg_abbrev=wsdm	Web services manageability is defined as a set of capabilities for discovering the existence, availability, health, performance, and usage, as well as the control and configuration of a Web service within the Web services architecture. See WSDM.
	2.3.5.28 WS-MetadataExchange	BEA Emerging. Administration Body: none Initially Proposed by BEA, IBM, Microsoft, SAP Specification published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. More information at Microsoft http://msdn.microsoft.com/ws/2004/03/ws-metadataexchange/	Web Services Metadata Exchange. To bootstrap communication with a Web service, this specification defines three request-response message pairs to retrieve three types of metadata: one retrieves the WS-Policy associated with the receiving endpoint or with a given target namespace, another retrieves either the WSDL associated with the receiving endpoint or with a given target namespace, and a third retrieves the XML Schema with a given target namespace. Together these messages allow efficient, incremental retrieval of a Web service's metadata.
	2.3.5.29 WS-Notification	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by IBM, Akamai, HP, SAP, Sonic Software, The Globus Alliance, TIBCO Specification Punlished. In	Web Services Notification, which includes the WS-BaseNotification, WS-BrokeredNotification, and WS-Topics specifications, implements the Notification pattern, where a service provider, or other entity, initiates messages based on a subscription or registration of interest from a

Technical Service	Standard	Forecast	Comment
		the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. A possible alternative standard is WS-Eventing. More information at IBM http://www-106.ibm.com/developerworks/library/ws-resource/?ca=dgr-lnxw57WSN&WSRF	service requestor. It defines how the publish/subscribe (pub sub) pattern commonly used in Message-Oriented middleware products can be realized using Web services. This includes brokered as well as direct pub sub which allows the publisher/subscribers to be decoupled and provides greater scalability.
	2.3.5.30 WS-Policy	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by BEA, IBM, Microsoft, SAP Specification Published. Early implementations of this specification provided by vendors permit experimentation, but are not recommended for production use. In the 2006-2007 timeframe more robust implementations are expected to be available and protocol will be well into standards process and usage then is encouraged. In the 2008-2010 time frame the standards is expected to be fully ratified, and have wide scale de facto adoption. More information at IBM Developerworks http://www-106.ibm.com/developerworks/webservices/library/ws-polfram/	Provides a general-purpose model and corresponding syntax to describe and communicate the policies of a Web service.
	2.3.5.31 WS-Provisioning	BEA Emerging. Administration Body: OASIS Initially Proposed by IBM Specification published and	WS-Provisioning describes the APIs and schemas necessary to facilitate interoperability between provisioning systems and to allow software vendors to provide

Technical Service	Standard	Forecast	Comment
		Technical Committee has been formed. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. More information at OASIS http://www.oasis-open.org/committees/provision/charter.php	provisioning facilities in a consistent way. The specification addresses many of the problems faced by provisioning vendors in their use of existing protocols, commonly based on directory concepts, and confronts the challenges involved in provisioning Web Services described using WSDL and XML Schema. The specification defines a model for the primary entities and operations common to provisioning systems including the provisioning and de-provisioning of resources, retrieval of target data and target schema information, and provides a mechanism to describe and control the lifecycle of provisioned state.
	2.3.5.32 WS-Reliability	BEA Emerging. Administration Body: OASIS Specification Punlished. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. More information at: http://developers.sun.com/techtopics/webservices/ws-reliability.v1.0.pdf http://developers.sun.com/techtopics/webservices/ws-reliability.v1.0.pdf http://otn.oracle.com/tech/webservices/htdocs/spec/WS-ReliabilityV1.0.pdf http://otn.oracle.com/tech/webservices/htdocs/spec/WS-ReliabilityV1.0.pdf	Specification for open, reliable Web services messaging including guaranteed delivery, duplicate message elimination and message ordering, enabling reliable communication between Web services.
	2.3.5.33 WS-Reliablemessaging	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by BEA, IBM, Microsoft, TIBCO	Describes a protocol that allows messages to be delivered reliably between distributed applications in the presence of software component, system, or network

Technical Service	Standard	Forecast	Comment
		Specification published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. A potential alternative atandard is WS-Reliability. More information at IBM Developerworks http://www-106.ibm.com/developerworks/webservices/library/ws-rm/	failures.
	2.3.5.34 WS-RF	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by IBM, Akamai, HP, SAP, Sonic Software, The Globus Alliance, TIBCO Specification published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. A potential alternative atandard is WS-Eventing. More information at IBM http://www-106.ibm.com/developerworks/library/ws-resource/ws-wsrfpaper.html	WS-Resource Framework The WS-Resource construct has been proposed as a means of expressing the relationship between stateful resources and Web services.
	2.3.5.35 WSRP	BEA Emerging. Administration Body: OASIS Initially Proposed by Various inc., BEA, Bowstreet, IBM, Novell, Oracle, Plumtree,	WS Remote Portals. The purpose of this TC is to develop a web services standard that will allow for the "plug-n-play" of portals, other intermediary web

Technical Service	Standard	Forecast	Comment
		SAP, Sun Approved Standard. Subsumes WS Interactive Applications. Robust implementations available and protocol is well into standards process. Production usage by end user organizations is on going, with the standard going mainstream with wide scale de facto adoption in the 2006-2007 time frame. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsrp	applications that aggregate content, and applications from disparate sources.
	2.3.5.36 WS-SecureConversation	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by IBM, Microsoft, RSA, Verisign Specification published. Robust implementations available and protocol is well into standards process. Production usage by end user organizations is on going, with the standard going mainstream with wide scale de facto adoption in the 2006-2007 time frame. More information at IBM Developerworks http://www-106.ibm.com/developerworks/webservices/library/ws-secon/	Defines extensions that build on WS-Security to provide secure communication. Specifically, it defines mechanisms for establishing and sharing security contexts, and deriving session keys from security contexts.
	2.3.5.37 WS-Security	BEA Emerging. Administration Body: OASIS Standard Initially Proposed by IBM, Microsoft, Verisign OASIS Standard. Robust implementations available and protocol is well into standards process. Production usage by end user organizations is on going, with the standard going	Describes enhancements to SOAP messaging to provide quality of protection through message integrity, message confidentiality, and single message authentication. See WS Security Services.

Technical Service	Standard	Forecast	Comment
		mainstream with wide scale de facto adoption in the 2006-2007 time frame. More information at OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wss	
	2.3.5.38 WS-SecurityPolicy	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by IBM, Microsoft, RSA, Verisign Specification published. Robust implementations available and protocol is well into standards process. Production usage by end user organizations is on going, with the standard going mainstream with wide scale de facto adoption in the 2006-2007 time frame. More information at IBM Developerworks http://www-106.ibm.com/developerworks/webservices/library/ws-secpol/	An addendum to WS-Security. Indicates the policy assertions for WS-Policy which apply to WS-Security.
	2.3.5.39 WS-Trust	BEA Emerging. Administration Body: Not yet submitted Initially Proposed by IBM, Microsoft, RSA, Verisign Specification published. In the 2004-2005 time frame exists only as specification and any usage requires hand coding. Early implementers do experimentation in the 2006-2007 time frame. Early adopters begin adoption of the more robust implementations of the standard in the 2008-2010 time frame. More information at IBM Developerworks http://www-106.ibm.com/developerworks/	Defines extensions that build on WS-Security to request and issue security tokens and to manage trust relationships.

Technical Service	Standard	Forecast	Comment
		webservices/library/ws-trust/	
2.3.6 XML Technologies	**2.3.6.1 ebXML**	BEA Emerging. EbXML, an OASIS sponsored set of standards which sees much competition from industry specific ontologies, versus "generic" languages to be used by all. Adoption is slow outside a few products. Some parts are an Open standard. Though ebXML is an approved, robust standard, its applicability is far narrower than Web Services. As an evolution of EDI, it primarily addresses B2B only. ebXML uses SOAP at the transport level, but has its own registry and orchestration. Web Service protocols that are designed to address multiple requirements will prove more valuable in time and ebXML will probably evolve to adopt additional Web Service protocols as they mature and are approved. In the 2005-2008 time-frame it will be reshaped significantly by maturing Web Services standards and the increasing adoption of Service Oriented Architectures. In the long term an enhanced version of this standard is likely to continue to exist as one many potential solutions although its fate beyond 2008 is uncertain. More information at: http://www.oasis-open.org/	Electronic Business XML. ebXML mission is to provide an open XML-based infrastructure enabling the global use of electronic business information in an interoperable, secure and consistent manner by all parties.. Using EbXML, companies now have a standard method to exchange business messages, conduct trading relationships, communicate data in common terms and define and register business processes.
	2.3.6.2 ebXML BPSS	BEA Emerging. Jointly sponsored by UN/CEFACT and OASIS. Little adoption by core organizations it is targeted at in the short term. In the 2005-2008 time-frame it will be reshaped significantly by maturing Web Services standards and the increasing adoption of Service Oriented Architectures. Beyond 2008 it is likely to support major Web	The ebXML Business Process Specification Schema v1.01 provides a standard framework by which business systems may be configured to support execution of business collaborations consisting of business transactions. It is based upon prior UN/CEFACT work, specifically the metamodel behind the UN/CEFACT Modeling Methodology (UMM) defined in

Technical Service	Standard	Forecast	Comment
		Services infrastructure standards and compete head to head with XML vocabularies developed for specific business transactions. More information at: http://www.ebxml.org/specs/ebBPSS.pdf	the N090R9.1 specification.
	2.3.6.3 ebXML CPPA	BEA Emerging. Tied to the fate of EbXML, an OASIS sponsored set of standards which sees much competition from industry specific ontologies, versus "generic" languages to be used by all. Adoption is slow in the short term. In the 2005-2008 time-frame it will be reshaped significantly by maturing Web Services standards and the increasing adoption of Service Oriented Architectures. In the long term an enhanced version of this standard is likely to continue to exist as one potential solution although its fate beyond 2008 is uncertain. More information at: http://www.ebxml.org/specs/ebCCP.doc	The ebXML Collaboration-Protocol Profile and Agreement Specification v1.0 describes the specific capabilities that a Trading Partner supports as well as the Service Interface requirements that need to be met in order to exchange business documents with that Trading Partner.
	2.3.6.4 ebXML MSG	BEA Emerging. Tied to the fate of EbXML, an OASIS sponsored set of standards which sees much competition from industry specific ontologies, versus "generic" languages to be used by all. Adoption is slow in the short term. In the 2005-2008 time-frame it will be reshaped significantly by maturing Web Services standards and the increasing adoption of Service Oriented Architectures. In the long term an enhanced version of this standard is likely to continue to exist as one potential solution although its fate beyond 2008 is uncertain. More information at:	The ebXML Message Service Specification v2.0 focuses on defining a communications-protocol neutral method for exchanging the electronic business messages. It defines specific enveloping constructs that support reliable, secure delivery of business information. Furthermore, the specification defines a flexible enveloping technique that permits EbXML-compliant messages to contain payloads of any format type.

Technical Service	Standard	Forecast	Comment
		http://www.oasis-open.org/committees/ebxml-cppa/documents/ebcpp-2.0.pdf	
	2.3.6.5 ebXML RIM	BEA Emerging. Tied to the fate of EbXML, an OASIS sponsored set of standards which sees much competition from industry specific ontologies, versus "generic" languages to be used by all. Adoption is slow in the short term. In the 2005-2008 time-frame it will be reshaped significantly by maturing Web Services standards and the increasing adoption of Service Oriented Architectures. In the long term an enhanced version of this standard is likely to continue to exist as one potential solution although its fate beyond 2008 is uncertain. More information at: http://www.oasis-open.org/committees/regrep/documents/2.0/specs/ebrim.pdf	Registry Information Model v2.0 specifies the information model for the EbXML Registry.
	2.3.6.6 ebXML RSS	BEA Emerging. Tied to the fate of EbXML, an OASIS sponsored set of standards which sees much competition from industry specific ontologies, versus "generic" languages to be used by all. Adoption is slow in the short term. In the 2005-2008 time-frame it will be reshaped significantly by maturing Web Services standards and the increasing adoption of Service Oriented Architectures. In the long term an enhanced version of this standard is likely to continue to exist as one potential solution although its fate beyond 2008 is uncertain. More information at: http://www.oasis-open.org/committees/regrep/documents/2.0/specs/ebrs.pdf	Registry Services Specification v2.0 defines the interface to the EbXML Registry Services as well as interaction protocols, message definitions and XML schema.
	2.3.6.7 HR XML PN	BEA Emerging. This standard	This standard describes the form of

Technical Service	Standard	Forecast	Comment
		is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.hr-xml.org/schemas/doc/cpo/personname-v1.0.pdf	the Person Name object used in HR-XML specifications
	2.3.6.8 HR XML SEP	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil	Staffing Exchange Protocol (SEP) is simple protocol for communication of information about job or position opportunities to job boards and other Internet recruiting venues.

Technical Service	Standard	Forecast	Comment
		More Information at: http://www.hr-xml.org/schemas/doc/recruiting/staffingexchangeprotocol-v1.0.pdf	
	2.3.6.9 IETF RFC 3023	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 3023, XML Media Types, January 2001.
	2.3.6.10 RDF Schema 1.0	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology	This specification describes how to use RDF to describe RDF vocabularies. The specification also defines a basic vocabulary for this purpose, as well as an extensibility mechanism to anticipate future additions to RDF.

Technical Service	Standard	Forecast	Comment
		Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.w3.org/TR/2000/CR-rdf-schema-20000327	
	2.3.6.11 REC-rdf-syntax-19990222	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.w3.org/TR/1999/REC-rdf-syntax-19990222	This document introduces a model for representing RDF metadata as well as a syntax for encoding and transporting this metadata in a manner that maximizes the interoperability of independently developed Web servers and clients.
	2.3.6.12 XForms 1.0	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard.	This document presents a proposal for explicitly representing data models for Xforms, the next generation of Web forms. Apart from other mechanisms described in this document, it is based upon the framework provided by XML Schema. While XML Schemas are used to define XML grammars, the Xforms data model is intended to capture the device -independent data model and logic of form-based Web applications. Although both specifications address different problems, they overlap in the definition of simple datatypes. Therefore, the datatypes defined in this specification are a close match

Technical Service	Standard	Forecast	Comment
		Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.w3c.org	to the datatypes found in XML Schema Part 2: Datatypes [Xschema-2].
	2.3.6.13 XForms Requirements :2001	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.w3c.org	Forms were introduced into HTML in 1993 and have proven to be a valuable part of many Web pages. The experience of the last few years has led to demands for improvements to HTML forms. XForms are a major revision of HTML Forms. Key goals for the next generation of web forms include ease of migration, improved interoperability and accessibility, enhanced client/server interaction, advanced forms logic, support for internationalization and greater flexibility in presentation.
	2.3.6.14 XML Signature	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated	This document specifies XML digital signature processing rules and syntax. XML Signatures provide integrity, message authentication, and/or signer authentication services for data of any type, whether located within the XML that includes the signature or elsewhere.

Technical Service	Standard	Forecast	Comment
		standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.w3.org/TR/xmldsig-core	
	2.3.6.15 XPATH 1.0	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.w3.org/TR/xpath	XPath is a language for addressing parts of an XML document, designed to be used by both XSLT and XPointer.
	2.3.6.16 Xquery 1.0	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It	Xquery provides flexible query facilities to extract data from collections of XML documents as well as non-XML data viewed as XML via a mapping mechanism. W3C Working Draft, 15 November 2002.

Technical Service	Standard	Forecast	Comment
		may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.w3.org/XML/Query	
	2.3.6.17 XSL 1.0:2001	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.w3.org/TR/2000/WD-xsl-20000327	XSL is a language for expressing stylesheets. It consists XSL of two parts: 1. a language for transforming XML documents, and 2. an XML vocabulary for specifying formatting semantics. An XSL stylesheet specifies the presentation of a class of XML documents by describing how an instance of the class is transformed into an XML document that uses the formatting vocabulary.
	2.3.6.18 XSLT 2.0:2003	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology	XSL Transformations (XSLT), Version 1.1, W3C Working Draft, 24 August 2001. This specification defines the syntax and semantics of XSLT 2.0, which is a language for transforming XML documents into other XML documents.

Technical Service	Standard	Forecast	Comment
		Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.w3.org/TR/2000/WD-xsl-20000327	

2.4 Service Platform and Infrastructure

Techncial Service	Standard	Forecast	Comment
2.4.1 Network and Systems Management	**2.4.1.1 CIM 2.2**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.dmtf.org/standards/cim_schema_v22.php	The DMTF Common Information Model (CIM) is an approach to the management of systems and networks that applies the basic structuring and conceptualization techniques of the object -oriented paradigm. The approach uses a uniform modeling formalism that together with the basic repertoire of object -oriented constructs supports the cooperative development of an object-oriented schema across multiple organizations.
	2.4.1.2 DMI 2.0	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.dmtf.org/standards/documents/DMI/DSP0001.pdf	The DMI has been designed to be: --independent of a specific computer or operating system; --independent of a specific management protocol; --easy for vendors to adopt --usable locally --- no network required; --useable remotely using DCE/RPC, ONC/RPC, or TI/RPC --capable of being mapped to existing management protocols (e.g., CMIP, SNMP)
	2.4.1.3 IETF RFC 2605	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that	Directory Server Monitoring MIB, June 1999. Defines a portion of the Management Information Base (MIB) for use with network

Techncial Service	Standard	Forecast	Comment
		this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	management protocols in the Internet community.
	2.4.1.4 IETF RFC 2788	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 2788, Network Services Monitoring MIB, March 2000.
	2.4.1.5 IETF RFC 2789	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information	IETF RFC 2789, Mail Monitoring MIB, March 2000.

Techncial Service	Standard	Forecast	Comment
		Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	
	2.4.1.6 IETF RFC 3060	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	IETF RFC 3060, Policy Core Information Model 6 Version 1 Specification, Internet Engineering Task Force, February 2000.
	2.4.1.7 OMI	BEA Emerging. Serving the needs of the systems management trade space, recently released, so sees little deployment in real world applications. Promise of XML/SOAP/HTTP is very compelling however and OMI could be a front runner to establish an industry standard. At this point it is a proprietary approach, that can be accessed as a webservice, jointly developed by HP and webMethods. Endorsed by Tivoli, BMC, and CA, and expect gradually increased adoption by other integration vendors through 2008. More information at: http://www.webmethods.com/PDF/OMI_Spec.pdf	Open Management Interface (OMI) defines a standards-based (XML/SOAP/HTTP) management interface. The intent of OMI is "to provide an easy, open way for systems management vendors and other interested parties to access and manage the resources associated with an integration platform, together with associated business processes.

Techncial Service	Standard	Forecast	Comment
2.4.2 Operating Systems	**2.4.2.1 IEEE 1003.1d**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://ltsc.ieee.org	IEEE 1003.1d:1999, Standard for Information Technology – Portable Operating System Interface (POSIX) Part 1: System Application Program Interface (API) – Amendment d: Additional Real-time Extensions [C Language].
	2.4.2.2 IEEE 1003.1j:2000	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://ltsc.ieee.org	This standard is part of the POSIX series of standards for applications and user interfaces to open systems. It defines the applications interface to system services for synchronization, memory management, time management, and thread management.
	2.4.2.3 P1003.1qd8	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be	This standard will define APIs for Trace management. The APIs are for the handling of event data to satisfy both Real-time and Fault Tolerance software applications. The scope of this effort will be limited by selecting only those APIs which support functions which are in common practice.

Techncial Service	Standard	Forecast	Comment
		implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://standards.ieee.org	
	2.4.2.4 P1003.21 v3	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://standards.ieee.org	A language-independent application program interface specification for interprocess communications in a real -time distributed systems computing domain. Portable Operating System Interface (POSIX) - Part 1: Real-Time Distributed Systems Communication Application Program Interface (API) [Language-Independent], V3.0, October 1999. A language-independent application program interface specification.
	2.4.2.5 UNIX Version 3	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.unix.org/version3/theguide.	The purpose of the single UNIX Specification is to revise, combine, and update the following standards: ISO/IEC 9945 -1, ISO/IEC 9945-2, IEEE Std 1003.1, IEEE Std 1003.2, and the Base Specifications of The Open Group Single UNIX Specification.

Techncial Service	Standard	Forecast	Comment
		html	
2.4.3 Security Infrastructure	**2.4.3.1 Application-level Firewall - Basic**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://niap.nist.gov/cc-scheme/PP_ALFWPP-MR_V1.0.html	This Application Level Firewall Protection Profile defines the minimum security requirements for firewalls used by U. S. Government organizations handling unclassified information in a low-risk environment. U.S. Government Application-level Firewall Protection Profile for Low Risk Environments, June 2000 Firewall devices in Basic Robustness environments.
	2.4.3.2 Application-level Firewall - Medium:2000	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://niap.nist.gov/cc-scheme/PP_ALFWPP-MR_V1.0.html	This traffic filter firewall Profile defines the minimum security requirements for firewalls used by U. S. Government organizations, including the DoD, handling unclassified or sensitive but unclassified information in a medium robust environment. U.S. DoD Application-level Firewall for Medium Robustness Environments, Version 1.0, 28 June 2000 Firewall devices in Medium Robustness environments.
	2.4.3.3 draft-ietf-idwg-beep-idxp-04.txt	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the	This memo describes the Intrusion Detection Exchange Protocol (IDXP), an application -level protocol for exchanging data between intrusion detection entities. IDXP supports mutual-authentication, integrity, and

Techncial Service	Standard	Forecast	Comment
		in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More information at: http://www.ietf.org/1id-abstracts.html	confidentiality over a connection-oriented protocol.
	2.4.3.4 draft-ietf-idwg-idmef-xml-06.txt	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org/internet-drafts/draft-ietf-idwg-idmef-xml-06.txt	The purpose of the Intrusion Detection Message Exchange Format (IDMEF) is to define data formats and exchange procedures for sharing information of interest to intrusion detection and response systems, and to the management systems which may need to interact with them. This Internet-Draft describes a data model to represent information exported by intrusion detection systems, and explains the rationale for using this model. An implementation of the data model in the Extensible Markup Language (XML) is presented, an XML Document Type Definition is developed, and examples are provided.
	2.4.3.5 IDS Analyzer:2002	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0.	Intrusion Detection System Analyzer Protection Profile, Draft 3, 15 September 2000. The Common Criteria (CC) Intrusion Detection System Analyzer Protection Profile (IDSAPP) specifies a set of security functional and assurance requirements for Information Technology (IT) products. Analyzers perform intrusion analysis and reporting of the collected information.

Techncial Service	Standard	Forecast	Comment
		http://disronline.disa.mil More Information at: http://csrc.nist.gov/cc/pp	
	2.4.3.6 IDS Sensor:2000	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://csrc.nist.gov/cc/pp	The Common Criteria (CC) Intrusion Detection System Sensor Protection Profile (IDSSPP) specifies a set of security functional and assurance requirements for Information Technology (IT) products. Sensors and Scanners collect information regarding IT System activity and vulnerabilities, and they forward the collected information to Analyzers.
	2.4.3.7 IEEE 802.10a:1999	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://ltsc.ieee.org	IEEE Standards for Local and Metropolitan Area Networks: Supplement to Standard for Interoperable LAN/MAN Security (SILS) – Security Architecture Framework (Clause 1), 22 March 1999.
	2.4.3.8 IEEE 802.10c	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is	IEEE Standards Interoperable LAN/MAN Security (SILS) – Key Management (Clause 3), 17 April 1998.

Techncial Service	Standard	Forecast	Comment
		currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://ltsc.ieee.org	
	2.4.3.9 IETF RFC 2315	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ietf.org	This document describes a general syntax for data that may have cryptography applied to it, such as digital signatures and digital envelopes. This memo provides information for the Internet community. It does not specify an Internet standard of any kind.
	2.4.3.10 TWG-98-07:2002	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0.	This document presents a framework to assist the writers of certificate policies or certification practice statements for certification authorities and public key infrastructures. In particular, the framework provides a comprehensive list of topics that potentially (at the writer's discretion) need to be covered in a certificate policy definition or a certification practice statement.

Techncial Service	Standard	Forecast	Comment
		http://disronline.disa.mil More Information at: http://csrc.nist.gov/pki	
	2.4.3.11 XKMS	BEA Emerging. XML Key Management Specification (XKMS 2.0) will be finalized by 2005. XKMS will be the preffered solution for simple clients to make use of sophisticated key management that will support of XML Encryption and XML Digital Signature and is consistent with SAML. Wisespread use after 2007. More information at: http://www.w3.org/TR/2004/CR-xkms2-20040405/	XML Key Management Specification (XKMS) specifies protocols for distributing and registering public keys, suitable for use in conjunction with the proposed standard for XML Signature [XML-SIG] developed by the World Wide Web Consortium (W3C) and the Internet Engineering Task Force (IETF) and an anticipated companion standard for XML encryption. The XML Key Management Specification (XKMS) comprises two parts -- the XML Key Information Service Specification (X-KISS) and the XML Key Registration Service Specification (X-KRSS).
2.4.4 Transmission	**2.4.4.1 af-sec-0100.002**	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.atmforum.com/	ATM Forum, af-sec-0100.002, ATM Security Specification Version 1.1, March 2001.
	2.4.4.2 CCSDS 910.5-R-2	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards	CCSDS 910.5-R-2, Space Link Extension – Service Management Specification, September 2001.

Techncial Service	Standard	Forecast	Comment
		Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ccsds.org/documents/text/CCSDS-910.5-R-2.txt	
	2.4.4.3 CCSDS 910.7-R-1	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ccsds.org/documents/text/CCSDS-910.5-R-2.txt	CCSDS 910.7-R-1, Space Link Extension – Service Management – Space Link Physical Layer Management Object Specification, October 2001.
	2.4.4.4 CCSDS 911.1-R-2	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil	CCSDS 911.1-R-2, Space Link Extension – Return All Frames Service Specification, November 2000.

Techncial Service	Standard	Forecast	Comment
		More Information at: http://www.ccsds.org	
	2.4.4.5 CCSDS 911.2-R-1	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ccsds.org	CCSDS 911.2-R-1, Space Link Extension – Return Virtual Channel Frames Service Specification, November 1997.
	2.4.4.6 CCSDS 912.1-R-2	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ccsds.org	CCSDS 912.1-R-2, Space Link Extension – Forward CLTU Service Specification, May 2000.
	2.4.4.7 CCSDS 912.3-R-1	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the	CCSDS 912.3-R-1, Space Link Extension – Forward Packet Service Specification, November 1997.

Techncial Service	Standard	Forecast	Comment
		in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ccsds.org	
	2.4.4.8 IEEE 802.10:1998	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://ltsc.ieee.org	IEEE Standards for Local and Metropolitan Area Networks: Standard for Interoperable LAN/MAN Security (SILS), 17 September 1998.
	2.4.4.9 IEEE 802.11a	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil	Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: High Speed Physical Layer (PHY) in the 5 GHz Band.

Techncial Service	Standard	Forecast	Comment
		More Information at: http://ltsc.ieee.org	
	2.4.4.10 IEEE 802.11b	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://ltsc.ieee.org	Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Higher Speed Physical Layer (PHY) Extension in the 2.4 GHz band.
	2.4.4.11 ISO 15396 (CCSDS 910.4-B-1)	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.iso.org	The scope of this Recommendation is the definition of all concepts and terms that establish a common basis for coordinating the development of CCSDS Recommendations for SLE services specifications. ISO 15396:1998 (CCSDS 910.4-B-1) Space Data and Information Transfer Systems – Cross Support Reference Model – Space Link Extension Services.
	2.4.4.12 ISO/IEC 8802-11:2003	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the	Local and metropolitan area networks - Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications. (ISO/IEC) (IEEE Std 802.11 - 2000 Edition).

Techncial Service	Standard	Forecast	Comment
		in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.ansi.org	
	2.4.4.13 ITU-R M.1457-1	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://www.itu.int/itudoc/itu-r/rec/m/index.html http://www.itu.int/publications/index.html	ITU-R M.1457-1, Detailed Specifications of the Radio Interfaces of IMT-2000, February 2001. The following 3G Radio interface specification that contains both 3GPP and 3GPP2 developed standard is emerging.
	2.4.4.14 MIL-STD-188-167	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information	MIL-STD-188-167, Interface Standard, Message Format for SHF SATCOM Link Control.

Techncial Service	Standard	Forecast	Comment
		Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://assist1.daps.dla.mil/quicksearch/	
	2.4.4.15 MIL-STD-188-183B	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://assist1.daps.dla.mil/quicksearch/	MIL-STD-188-183B, Interoperability and Performance Standard for Multiple Accessing 5-kHz and 25-kHz UHF SATCOM Channels.
	2.4.4.16 MIL-STD-188-184A	BEA Emerging. This standard is a candidate to help the Program Manager determine what is likely to change within three years and to suggest that this is an area where upgradeability should be a concern. The standard is currently an Emerging standard in the in the Department of Defense Information Technology Standards Registry and is expected to be elevated to Mandatory status by 2007. It may be implemented, but not used in lieu of a mandated standard. Department of Defense Information Technology Standards Registry Baseline Release 04-2.0. http://disronline.disa.mil More Information at: http://assist1.daps.dla.mil/quicksearch/	MIL-STD-188-184A, Interoperability and Performance Standard for the Data Control Waveform.

Appendix A – Appendix A - Engineering Decisions Record

Throughout the development of the BEA TV products, analysts and engineers make a number of decisions that affect the content of each new product release. These decisions occur periodically during the TV development process, a process comprised of five high order procedures. These are:

- Identify and define technical services and standards data,
- Organize standards
- Collect additional information through subject matter expert interviews,
- Refine the data collection to target BEA requirements, and
- Produce the TV-1, TV-2, and Systems Technology Forecast (SV-9) products.

The Engineering Decisions made during these procedures, and their impact upon the BEA Technical View products, is as follows:

A.1 Identify and Define Technical Services and Standards Data

The widest possible array of authoritative sources are consulted for guidance, illumination, and cross reference of standards, either mandated or emerging, within the DoD and its services. On-going business and technical analysis of emerging standards in the Domain Owners Integration Team (DoD/IT) Standards Registry (DISR) determines their relevance to the BEA TV-2. Standards that do not directly apply to business systems (such as standards for routing protocols, backplane buses, and weapons systems) in the business domains are outside the scope of the BEA TV-2.

In order to avoid influencing system developers and architecture users toward a particular commercial solution, a conscious effort is made by BEA during the development of the TV-2 and SV-9 products to provide a balanced technical focus on appropriate technologies and the standards that support them. No particular vendor's standards or technologies dominate the TV-2 and SV-9 products. These architecture products do not focus on the commercial products that may implement any of the BEA standards or technologies.

Some specific recent TV-1, TV-2 and SV-9 development activities include the following:

- The Application, Collaboration, Discovery, Enterprise Service Management (ESM), Information Assurance/Security (IAS), Infrastructure Transport, Mediation, Messaging, Storage, and User Assistance Core Enterprise Services were added to the SV-9 as BEA Technical Services.
- Standards with updated references for DISR standards and references to additional information were mapped to Technical Services, including to the newly added Technical Services that represent the Core Enterprise Services when appropriate.

- Newly added Technical Services have forecasts based on information from many industry analysis sources, including the latest GES Technology Trends and Forecast Reports by Gartner Research.
- The forecasts for Technical Services that currently have standards linked to them in the BEA were updated. Older forecasts for Technical Services that do not currently have standards linked to them in the BEA have not been updated. Technical Services that did not have standards linked to them and that did not have forecasts associated with them have been removed from the BEA. Forecasts and the confidence level of the forecasts for some emerging technologies such as Grid Computing were reviewed. References to some of the analysis sources have been provided for forecasts in such cases where possible.
- 46 TV standards were updated
- 71 new standards were added
- 22 standards were deleted

DISR references as well as references to additional sources of information, as appropriate, were updated for all standards.

A.2 Organize Technical Services data into a data repository

1. Use Popkin System Architect v10.0 (and updates) as the Data Repository and schema for standards related data.

   Impact: A program level decision, designed to facilitate the integration of data between OV, SV and TV products.

2. Use Microsoft Excel as the working repository of Technical Services related data.

   Impact: The use of Excel decreases the requirement for additional operator training on the Popkin product. Excel increases the flexibility with which multiple analysts could interact with data repository. Excel increases the ease with which draft versions of the repository are shared with other members of the BEA development team. Excel alleviates the limitations placed upon users who need access to work with the data repository (licenses, learning curve, and level of effort). Excel increases the team's ability to perform analytical reviews of the data repository using Excel's data analysis capabilities.

3. Load the Popkin Data Repository immediately prior to product delivery

   Impact: Latest available version of data available through Popkin Systems Architect is the version last delivered as a finished product.

A.3 Collect additional information through subject matter expert interviews

1 The Scope of BEA does not extend to the wide area network.

Impact: Team analysts concluded that BEA based systems are implemented largely on existing communications infrastructure, or in places where standards for such infrastructures already exist. It is outside of the realm of responsibility for BEA to mandate the telecommunications standards deployed at a given facility. This decision allows the TV analysts to scope the area to which BEA standards apply. That scope encloses all hardware and software components within a given BEA compliant system, extending to the network layer for the purpose of Local Area Network communications. The limits of the BEA scope are: (1) the communications medium used to interface with a BEA compliant system (e.g. RJ-45 cable, universal serial bus, or wireless interfaces, etc.) and (2) the communications protocol employed by that link (for example, TCP/IP). Telecommunications devices such as routers and switches are considered part of the site infrastructure and therefore beyond the limits of the BEA mandate.

2 Conduct periodic interviews with industry and DoD technology authorities.

Impact: This decision is derived from the project plan; however, specific implementation is subject to the team consensus regarding areas of technology that should be addressed first. Therefore, areas such as security or web services may hold an apparently arbitrary advantage over technologies such as Extensible Markup Language (XML) based upon the Engineering Decision of the TV analyst.

3 3. Participate in DISR Information Technology Standards Working Groups (ISWGs).

Impact: This provides a forum for discussing the standards with representatives from various DoD organizations who have the proper technical, functional, and acquisition expertise from their organizations. The ISWGs are responsible for making recommendations for updating the DISR. The technology areas provide the primary body for identifying the lifecycle stage of each standard and profile contained in the DISR. The ISWGs are responsible for making recommendations for updating the DISR.

A.4 D. Data analysis to target BEA requirements

1 Tailor the collection of Technical Services and associated Forecasts to meet BEA requirements.

Impact: The repository of Technical Services changes as needed by Engineering Decision to eliminate Technical Services that are outside the area of direct interest to BEA and include new Technical services when appropriate.

For example, to better align with the newly emerging DISR Standards organization schema, the Application, Collaboration, Discovery, Enterprise Service Management (ESM), Information Assurance/Security (IAS), Infrastructure Transport, Mediation, Messaging, Storage, and User Assistance, Logistics and Human Resources enterprise services ate treated as BEA Technical Services. Where appropriate, Technical Services have BEA forecasts based on information from many industry analysis sources, including the latest GES Technology Trends and Forecast Reports by Gartner Research. Standards with updated references for DISR standards and references to additional sources of

information were linked to BEA Technical Services, including to the newly added Technical Services that represent the Core Enterprise Services, as appropriate.

Below is a list of some standards that were previously in the list of BEA standards but have recently been retired because they either were superseded by newer standards, made irrelevant by the latest version of DISR, or deemed irrelevant based on analysis:

- ANSI T1.112:2001
- ANSI/AIAA R-004
- DoD AIMS 03-1000
- IETF RFC 2251
- IETF RFC 2314
- IETF RFC 2437
- IETF RFC 2459
- IETF RFC 2479
- IETF RFC 2559
- IETF RFC 2587
- IETF RFC 2633
- IETF RFC 3152
- ISO 9660
- ISO/IEC 15287-2
- MIL-STD-188-166
- MIL-STD-188-170
- MIL-STD-188-182B
- MIL-STD-2525B
- MIL-STD-3011
- OMG documentformal/01-03-08
- SDN.706
- SDN.903

Below is a list of some of the standards that were previously not in the list of BEA standards but have recently been added because they are either newly introduced in the latest version of the

DISR (JTA 6.0), or otherwise considered relevant to the BEA based on technical analysis of the standards. Note that this list includes both BEA Mandated (TV-1) and BEA Emerging (TV-2) standards:

- ANSI/AIM-BC1
- ANSI/NIST-ITL 1
- ANSI/US PRO-100
- ISO 10303-1
- ISO 10303-101:1999
- ISO 10303-105:1996
- ISO 10303-11
- ISO 10303-201
- ISO 10303-202
- ISO 10303-203:1994
- ISO 10303-204
- ISO 10303-21:2002
- ISO 10303-22:1998
- ISO 10303-224:2001
- ISO 10303-31
- ISO 10303-32
- ISO 10303-41:2000
- ISO 10303-42:2000
- ISO 10303-43:2000
- ISO 10303-44:2000
- ISO 10303-45
- ISO 10303-46
- ISO 10303-47
- ISO 10303-49
- ISO/CD 10303-218

- ISO/IEC 13584-20
- ISO/IEC 13584-42
- ISO/IEC 15693-1:2000
- ISO/IEC 15693-2:2001
- ISO/IEC 15693-3:2001
- ISO/IEC 7816-1
- ISO/IEC 7816-10:1999
- ISO/IEC 7816-2
- ISO/IEC 7816-3
- ISO/IEC 7816-4/AM1:1997
- ISO/IEC 7816-5/AM1:1996
- ISO/IEC 7816-6/Amd 1:2000
- ISO/IEC 7816-7
- ISO/IEC 7816-8:1999
- ISO/IEC 7816-9:2000
- ISO/IEC CD 7816-11
- ISO/IEC CD 7816-15
- ISO/TR 10303-12
- MIL-PRF-28001C
- DOD Non-commercial DID
- EPC Tag Spec v1.1
- Passive Radio Frequency Identification (RFID) Air Interface Class 1
- RF-Tag v2.0
- CIMCPP
- IETF RFC 3414
- MLOSPP
- PKIKMITKNPP

- PP_FWPP-MR
- RSA Labs PKCS #12:1999
- SAML 1.1 OASIS
- SLOSPP
- WS-Security 1.0 OASIS
- XML-Encryption W3C
- ANSI/IEEE 754
- FIPS Pub 184
- IETF Standard 33/RFC 1350
- ISO/IEC 9075
- ISO/IEC 9075-3
- ISO/IEC 9945-1:Real-time
- ISO/IEC 9945-1:Thread
- OMG ptc/03-07-07
- WS-I Basic Profile 1.0
- XHTML 1.1: 31 May 2001
- XMI-ax
- XML 1.1:2004
- IETF RFC 2030

Below is a list of some standards that were previously in the list of BEA standards but have recently been reviewed and updated rather because a newer version was available, or the update was necessary for alignment with the DISR:

- ASC X12N 270/271:2002
- ASC X12N 276/277:2002
- ASC X12N 278:2002
- ASC X12N 820:2002
- ASC X12N 834:2002
- ASC X12N 835:2002

- ASC X12N 837 Dent:2002
- ASC X12N 837 Inst:2002
- ASC X12N 837 Prof:2002
- C321
- C808
- CAPP
- CSS1:1999
- DICOM:2003
- DOM 1.0
- FIPS Pub 180-2
- FIPS Pub 197
- IDS Analyzer:2002
- IDS Scanner:2002
- IETF RFC 3377
- IETF RFC 3596
- IETF RFC 1981
- IETF RFC 1990
- IETF RFC 2126
- IETF RFC 2464
- IETF RFC 2474
- IETF RFC 3315
- ISBT 128 v1.4
- ISO/IEC 8802-11:2003
- ISO/IEC 8802-3:2000 (IEEE Std. 802.3-2002)
- ISO/IEC 9075-5
- ITU-T X.500:2001
- Linux 2.0

- Linux 2.0 IA32
- Linux 2.0 PPC32
- LSPP
- MISP v2.4
- NCPDP Batch v1.1
- ODMG 3.0
- OMG document formal/99-10-07:2004
- SOAP 1.1
- Traffic Filtering Firewall - Low Risk
- Traffic Filtering Firewall - Medium Robustness 1.4
- Win32 APIs-Current
- XHTML 1.0:2002
- XSLT 2.0:2003

A.5 E. Produce the TV-1, TV-2 and SV-9 products

1 Use custom reports from the Popkin System Architect and the predefined TV-1, TV-2, and SV-9 reports as the basis for the data and layout for the architecture products.

Impact: The predefined TV-1, TV-2, and SV-9 reports are inadequate for the needs of the BEA development team. They are used as a baseline, but extensive post editing, reformatting, and inclusion of additional information changes the documents to achieve a more desirable product.